

LISTING OF DOCKETS PUBLISHED IN FEDERAL REGISTER

<u>FR NO. & DATE</u>	<u>DOCKET NO.</u>	<u>SUBJECT</u>	<u>CLOSURE DATE</u>
59 FR 10591 (03/07/94)	A-88-03	40 CFR Part 63 NESHAPS: Emission Stds. for Hazardous Air Pollutants for Ethylene Oxide Commercial Sterilization and Fumigation Oxides (Proposed rule and notice of hearing)	05/06/94

Docket No. A-88-03
Subcategory II-A

EPA Studies or Contractor Reports

Number	Date of Document	Description
II-A-1	01-Dec-78	Capital and Operating Costs of Selected Air Pollution Control Systems. R. Neveril, GARD, Inc. EPA Publication No. 450/5-80-002. pp. 3-11, 3-12, 3-16.
II-A-2	01-Mar-81	Mitigation of Worker Exposure to Ethylene Oxide. R. Goldgraben, et. al, Mitre Corp. NTIS No. PB-81-233033.
II-A-3	01-Mar-81	Prevention of Exposure to Chemical Carcinogens: Ethylene Oxide. Midwest Research Institute. Prepared for National Cancer Institute, Bethesda, Maryland. 80 p.
II-A-4	01-Aug-81	The Costs of Measures Used To Mitigate Worker Exposure to Ethylene Oxide. Mitre Corp. Prepared for U.S. Environmental Protection Agency.
II-A-5	02-Oct-84	Evaluation of the Efficiency of an Ethylene Oxide Scrubber. Scott Environmental Services. Prepared for Ethicon, Inc., Somerville, New Jersey. 37 p.
II-A-6	01-Nov-86	Economic Analysis of Candidate Hazardous Organics--NESHAP Controls. Draft Report. Research Triangle Institute. Prepared for U.S. Environmental Protection Agency, Research Triangle Park, North Carolina. pp. 2-1 - 2-32.
II-A-7	10-Mar-87	Industry Profile: Sterilization. Draft. Midwest Research Institute. Prepared for U.S. Environmental Protection Agency, Research Triangle Park, North Carolina. 6 p.

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- II-A-8 Research and Development Flare Efficiency Study. July 1983. Office of Air Quality Planning and Standards, U. S. Environmental Protection Agency. EPA Publication No. EPA-600/2-83-052.
- II-A-9 Sources of Ethylene Oxide Emissions. April 1985. David W. Markwordt, Emissions Standards and Engineering Division, Office of Air Quality Planning and Standards, U. S. Environmental Protection Agency. EPA Publication No. 450/3-85-014.
- II-A-10 User's Manual for the Human Exposure Model (HEM). June 1986. Pollutant Assessment Branch. Office of Air Quality Planning and Standards, U. S. Environmental Protection Agency. EPA Publication No. 450/5-86-001.
- II-A-11 Quality Assurance of the Human Exposure Model (HEM) Source Information for Ethylene Oxide. June 9, 1986. Radian Corporation. Prepared for U. S. Environmental Protection Agency. Research Triangle Park, North Carolina.
- II-A-12 Economic Analysis of the Candidate Ethylene Oxide NESHAP Controls on Commercial Sterilization - Draft Report. January 1988. Research Triangle Institute. Prepared for U. S. Environmental Protection Agency, Research Triangle Park, North Carolina.
- II-A-13 Ethylene Oxide Control Technology Development for Hospital Sterilizers. Final Report. March 2, 1988. Air and Energy Engineering Research Laboratory, U. S. Environmental Protection Agency.
- II-A-14 Sampling/Analytical Method Evaluation for Ethylene Oxide Emission and Control Unit Efficiency Determinations. Final Report. April 5, 1988. Radian Corporation. Prepared for U. S. Environmental Protection Agency, Research Triangle Park, North Carolina.

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- II-A-15 Analytical Method Evaluation for Measuring Ethylene Oxide Emissions from Commercial Dilute-Acid Hydrolytic Control Units. Final Report. September 30, 1988. Radian Corporation. Prepared for U. S. Environmental Protection Agency, Research Triangle Park, North Carolina.
- II-A-16 Hospital Waste Combustion Study: Data Gathering Phase. Final. December 1988. Office of Air Quality Planning and Standards, U. S. Environmental Protection Agency. EPA Publication No. EPA-450/3-88-017.
- II-A-17 Alternative Control Technology Document - Ethylene Oxide Sterilization/Fumigation Operations. March 1989. Emissions Standards Division, Office of Air Quality Planning and Standards, U. S. Environmental Protection Agency. EPA Publication No. 450/3-89-007.
- II-A-18 Hospital Incinerator Operator Training Course: Volume I Student Handbook. March 1989. Control Technology Center, U. S. Environmental Protection Agency. EPA Publication No. EPA-450/3-89-003.
- II-A-19 Operation and maintenance of Hospital Medical Waste Incinerators. March 1989. Control Technology Center, U. S. Environmental Protection Agency. EPA Publication No. EPA-450/3-89-002.
- II-A-20 Medical Waste Incineration Emission Test Report - AMI Central Carolina Hospital, Sanford, North Carolina. December 1990. Office of Air Quality Planning and Standards, U. S. Environmental Protection Agency. EMB Report 90-MWI-5 Volume I.
- II-A-21 Medical Waste Incineration Emission Test Report - Borgess Medical Center, Kalamazoo, Michigan. December 1991. Office of Air Quality Planning and Standards, U. S. Environmental Protection Agency. EMB Report 90-MWI-9 Volume I.
- II-A-22 Ethylene Oxide Emissions for Commercial Sterilization Fumigation Operations Background Information for Proposed Standards. Draft EIS.

October 1992. Office of Air Quality Planning and Standards, U. S. Environmental Protection Agency. EPA Publication No. EPA-453/D-13-016.

II-A-23

Information Collection Request for Enhanced Monitoring Program Pursuant to Section 114(a)(3) of the Clean Air Act. January 27, 1993. Stationary Source Compliance Division, Office of Air Quality Planning and Standards, U. S. Environmental Protection Agency.

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EPA Factual Memoranda

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Number	Date of Document	Description
II-B-1	11-Jun-85	A. Beloian, EPA:Benefits and Use Division, to P. Lapsley, EPA:Registration Division. Ethylene Oxide: Non-Medical Uses.
II-B-2	13-Jan-86	C. Beall, MRI, to D. Markwordt, EPA:CPB. Trip report: North Carolina Archives and Records, Raleigh, North Carolina, on December 6, 1985.
II-B-3	04-Mar-86	C. Beall, MRI, to D. Markwordt, EPA:CPB. Trip report: Micro-Biotrol, Inc., Smyrna, Georgia, on February 19, 1986. (Confidential: 6-page report)
II-B-4	18-Mar-86	C. Beall, MRI, to D. Markwordt, EPA:CPB. Trip report: Sterilization Services of Tennessee, Memphis, Tennessee, on January 8, 1986. (Confidential: 1-page addendum)
II-B-5	21-Mar-86	C. Beall, MRI, to D. Markwordt, EPA:CPB. Trip report: McCormick & Company, Hunt Valley, Maryland, on January 16, 1986. (Confidential: 1-page addendum)
II-B-6	26-Mar-86	C. Beall, MRI, to D. Markwordt, EPA:CPB. Libraries, archives, and museums list.
II-B-7	28-Apr-86	D. Newton, MRI, to D. Markwordt, EPA:CPB. Short-Term emission parameters for ethylene oxide emissions from a model ethylene oxide sterilization facility.
II-B-8	08-Jul-86	S. Srebro, MRI, to D. Markwordt, EPA:CPB. Recommendation for costing the disposal of ethylene glycol produced by the Damas ethylene scrubber.
II-B-9	10-Jul-86	D. Wallace and B. Coronna, MRI, to D. Markwordt, EPA:CPB. Recommendation for costing the control of ethylene oxide emissions from aeration rooms. (Confidential: 14-page memorandum)
II-B-10	15-Aug-86	D. Wallace, MRI, to A. Quillian, EPA:PAB. Clarification of short-term emission parameters for ethylene oxide emissions from a model ethylene oxide sterilization facility.
II-B-11	02-Sep-86	A. Quillian, EPA:MAS, to D. Markwordt, EPA:CPB. Short-term concentration estimates for ethylene oxide emissions from sterilization facility.

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EPA Factual Memoranda

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Number	Date of Document	Description
II-B-12	01-Oct-86	Midwest Research Institute. Technical Report: Ethylene oxide emissions from the use of ethylene oxide as a sterilant at commercial sterilization facilities.
II-B-13	09-Oct-86	S. Srebro, MRI, to Commercial Sterilization Files. Facilities to which were sent replacement copies of July 15, 1986, Section 114 information request.
II-B-14	17-Oct-86	S. Srebro and R. Crume, MRI, to D. Markwordt, EPA:CPB. Examination of ethylene oxide cost routine for commercial sterilization facilities. (Confidential: 19-page memorandum)
II-B-15	21-Jan-87	V. Soltis, MRI, to D. Markwordt, EPA:CPB. Comments on Part A of the draft report of the California Air Resources Board on ethylene oxide.
II-B-16	28-Jan-87	V. Soltis, MRI, to Commercial Sterilization Files. Documentation for the miscellaneous sterilization and fumigation data base. (Confidential: Appendix D)
II-B-17	19-Feb-87	V. Soltis, MRI, to D. Markwordt, EPA:CPB. Baseline and candidate NESHAP-level controlled emissions of ethylene oxide from commercial sterilization facilities.
II-B-18	20-Mar-87	S. Srebro, MRI, to D. Markwordt, EPA:CPB. Capital cost, annualized cost, and cost effectiveness of reducing ethylene oxide emissions at commercial sterilization facilities. (Confidential: Appendices A, F, G, H)
II-B-19	17-Apr-87	V. Soltis, MRI, to D. Markwordt, EPA:CPB. HEM inputs for ethylene oxide commercial sterilization. (Confidential: 41 pages of printouts)
II-B-20	23-Apr-87	S. Srebro and V. Soltis, MRI, to Commercial Sterilization Project Files. Database for development of commercial sterilization NESHAP. (Confidential: 39 pages of printouts)
II-B-21	19-May-87	N. Pate, EPA:PAB, to D. Markwordt, EPA:CPB. Ethylene oxide commercial sterilization human exposure model results of May 18, 1987.

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Number	Date of Document	Description
II-B-22	27-Oct-87	S. Srebro, MRI, to Commerical Sterilization Project Files. Facilities contacted during 1986 that indicated use of ethylene oxide. (Memorandum contains list of facilities contacted.)
II-B-23	27-Oct-87	S. Srebro, MRI, to Commerical Sterilization Project Files. Facilities contacted during 1986 that indicated no use of ethylene oxide. (Memorandum contains list of facilities contacted.)

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- II-B-24 N. Pate, EPA:PAB, to Commercial Sterilization Files. August 21, 1985. Memorandum to document the exposure/risk analysis for ambient concentrations of ethylene oxide.
- II-B-25 R. Crume, MRI, to Project File 7712-K. September 25, 1986. Memorandum concerning Sensitivity Analysis on Estimates of Annual Incidence and Cost-per-Life for the Control of Ethylene Oxide Emissions from Medical Equipment Suppliers.
- II-B-26 N. Pate, EPA:PAS, to D. Markwordt, EPA:CMS. May 19, 1987. Ethylene oxide commercial sterilization human exposure model results of May 18, 1987.
- II-B-27 S. Srebro, MRI, to Commercial Sterilization Project Files. October 27, 1987. Memorandum listing 595 facilities that do not use ethylene oxide.
- II-B-28 D. Guinnup and Q. Nguyen, EPA:MAS, and T. Mohin, EPA:PIHS, to D. Markwordt, EPA:CMS. January 17, 1988. Memorandum summarizing short-term modeling of ethylene oxide emissions from commercial sterilization facilities.
- II-B-29 W. Farland, EPA:OHEA, to Ila Cote, EPA:PIHS. February 3, 1988. Memorandum from the Reproductive Effects Assessment Group on Hazards for Developmental Toxicity from Acute Exposure to Ethylene Oxide.
- II-B-30 N. Pate, EPA:PAB, to Project Files. March 31, 1988. Draft copy provided in advance to D. Markwordt, EPA:CMS. Memorandum concerning ethylene oxide short-term exposure and risk assessment methodology.
- II-B-31 C. Lang, MRI, to D. Markwordt, EPA:CMS. June 3, 1988. Memorandum discussing issues raised at NAPCTAC and recommended actions.
- II-B-32 J. Margeson, EPA:EMSL to D. Markwordt, EPA:CMS. August 29, 1988. Information concerning scrubber testing for EO emissions.
- II-B-33 S. Srebro, MRI, to D. Markwordt, EPA:CMS.

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October 5, 1988. Information concerning the effect on the Maximum Individual Risk (MIR) from an increase in the ethylene oxide removal efficiency.

- II-B-34 S. Srebro, MRI, to D. Markwordt, EPA:CMS. December 12, 1988. Documentation of the procedure used to develop baseline short-term ethylene oxide emission parameters.
- II-B-35 D. Guinnup, EPA:MAS, to D. Markwordt, EPA:CMS. December 21, 1988. Memorandum summarizing short-term modeling of ethylene oxide emissions from commercial sterilization facility.
- II-B-36 S. Srebro, MRI, to D. Markwordt, EPA:CMS. January 10, 1989. Memorandum summarizing the July 1988 Section 114 information request and its results.
- II-B-37 Q. Nguyen and D. Guinnup, EPA:MAS, and T. Mohin, EPA:PIHS, to D. Markwordt, EPA:CMS. January 23, 1989. Memorandum summarizing short-term modeling of ethylene oxide emissions from commercial sterilization facility.
- II-B-38 S. Srebro, MRI, to D. Markwordt, EPA:CMS. February 21, 1989. Trip Report: Iolab Incorporated, Claremont, California, on December 9, 1988.
- II-B-39 Q. Nguyen and D. Guinnup, EPA:MAS, and T. Mohin, EPA:PIHS, to K. Blanchard, EPA:PIHS. February 22, 1989. Memorandum summarizing additional short-term modeling of ethylene oxide emissions from commercial sterilization facilities.
- II-B-40 S. Srebro, MRI, to D. Markwordt, EPA:CMS. March 7, 1989. Trip Report: Medtronic, Inc., Anaheim, California, on December 9, 1988.
- II-B-41 Q. Nguyen and D. Guinnup, EPA:MAS, and T. Mohin, EPA:PIHS, to D. Markwordt, EPA:CMS. May 1, 1989. Memorandum correcting short-term modeling of ethylene oxide emissions from Rock Mount commercial sterilization facility.

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- II-B-42 Q. Nguyen and D. Guinnup, EPA:MAS, to D. Markwordt, EPA:CMS. June 16, 1989. Memorandum summarizing results of the short-term modeling of ethylene oxide emissions from a large hospital sterilization facility.
- II-B-43 B. Rosensteel, EPA:CMS, to J. Brown, EPA:ADS. August 21, 1990. Memorandum requesting changes to Docket No. A-88-03.
- II-B-44 V. deOlloqui, MRI, to Commercial Sterilization Files. August 22, 1990. List of responses to the July 1989 Section 114 letter.
- II-B-45 V. deOlloqui, MRI, to D. Markwordt, EPA:CMS. September 11, 1990. Trip Report: Isomedix Corporation, Spartanburg, South Carolina, on June 14, 1990. (Finalized October 16, 1990).
- II-B-46 V. deOlloqui, MRI, to D. Markwordt, EPA:CMS. November 2, 1990. Statement of nonconfidentiality for trip report on site visit to Isomedix facility in Spartanburg, South Carolina, on June 14, 1990.
- II-B-47 S. Srebro and V. deOlloqui, MRI, to D. Markwordt, EPA:CMS. November 15, 1990. Costing Methodology for the Control of Aeration Room Emissions Commercial Sterilization NESHP.
- II-B-48 V. deOlloqui and S. Srebro, MRI, to D. Markwordt, EPA:CMS. February 7, 1991. Baseline Cost of Reducing EO Emissions from Sterilizer Vents and Associated Vacuum Pump Drains.
- II-B-49 V. deOlloqui and S. Srebro, MRI, to D. Markwordt, EPA:CMS. February 7, 1991. Costing of Control Alternatives for Rear Chamber Exhaust Emissions.
- II-B-50 J. Brown, EPA:ADS, to B. Rosensteel, EPA:CMS. March 12, 1992. Confirmation of changes to the docket requested August 21, 1990.
- II-B-51 P. Redmond and D. Hearne, MRI, to Project Files. July 2, 1992. Documentation of telephone survey concerning the use of control devices for aeration rooms used with ethylene oxide (EO) commercial sterilizers.

II-B-52

D. Hearne, MRI, to D. Markwordt, EPA:CMS.
March 30, 1993. Discussion of enhanced monitoring
requirements for the ethylene oxide commercial
sterilization NESHAP.

II-B-53

D. Hearne, MRI, to D. Markwordt, EPA:CMS.
January 3, 1994. Calculation of MACT floors for
ethylene oxide commercial sterilization and
fumigation operations.

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EPA Correspondence to Persons Outside the Agency

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Number	Date of Document	Description
II-C-1	23-Oct-85	C. Beall, MRI, to T. Burns, American Spice Trade Association, Inc. Requesting list of EO fumigators used in spice trade.
II-C-2	21-Nov-85	C. Beall, MRI, to D. Olson, North Carolina Department of Cultural Resources. Requesting visit to Raleigh, North Carolina, facility.
II-C-3	27-Nov-85	C. Beall, MRI, to P. Ochs, United States Department of Agriculture (USDA). Requesting information on USDA EO fumigation operations.
II-C-4	03-Dec-85	E. Friedman, MRI, to R. Berglund, Union Carbide Corp. Requesting information on EO use as chemical intermediate.
II-C-5	06-Dec-85	S. Wyatt, EPA:CPB, to D. Olson, North Carolina Department of Cultural Resources. Requesting visit to Raleigh, North Carolina, facility.
II-C-6	06-Dec-85	S. Wyatt, EPA:CPB, to J. Kjellstrand, Micro-Biotrol, Inc. Requesting visit to Smyrna, Georgia, facility.
II-C-7	20-Dec-85	S. Wyatt, EPA:CPB, to P. Adams, Sterilization Services of Tennessee. Requesting visit to Memphis, Tennessee, facility.
II-C-8	20-Dec-85	C. Beall, MRI, to E. Morris, North Carolina Department of Cultural Resources. Letter transmitting draft report of December 6, 1985, visit for comment and review. (See II-B-2 for finalized report).
II-C-9	27-Dec-85	S. Wyatt, EPA:CPB, to M. More, McCormick & Company, Inc. Requesting visit to Hunt Valley, Maryland, facility.
II-C-10	15-Jan-86	C. Beall, MRI, to C. Morris, North Carolina Department of Cultural Resources. Letter transmitting finalized report of December 6, 1985, visit. (See II-B-2 for finalized report).
II-C-11	11-Feb-86	C. Beall, MRI, to P. Adams, Sterilization Services of Tennessee. Letter transmitting draft report of January 8, 1986, visit for comment and review. (See II-B-4 for finalized report).

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Number	Date of Document	Description
II-C-12	12-Feb-86	C. Beall, MRI, to M. More, McCormick & Company, Inc. Letter transmitting draft report of January 16, 1986, visit for comment and review. (See II-B-5 for finalized report).
II-C-13	14-Feb-86	S. Wyatt, EPA:CPB, to J. Kjellstrand, Micro-Biotrol, Inc. Confirming visit to Smyrna, Georgia, facility.
II-C-14	05-Mar-86	C. Beall, MRI, to J. Kjellstrand, Micro-Biotrol, Inc. Letter transmitting draft report of February 19, 1986, visit for comment and review. (Finalized report [II-B-3] is confidential).
II-C-15	19-Mar-86	D. Newton, MRI, to C. Berndt, Araclean Services, Inc. Information about EPA/MRI ethylene oxide study.
II-C-16	20-Mar-86	C. Beall, MRI, to P. Adams, Sterilization Services of Tennessee. Letter transmitting finalized report of January 8, 1986, visit. (See II-B-4 for finalized report).
II-C-17	21-Mar-86	C. Beall, MRI, to M. More, McCormick & Company, Inc. Letter transmitting finalized report of January 16, 1986, visit. (See II-B-5 for finalized report).
II-C-18	31-Mar-86	D. Newton, MRI, to W. Dawson, Daig Corp. Information about EPA/MRI ethylene oxide study.
II-C-19	21-Apr-86	C. Beall, MRI, to J. Kjellstrand, Micro-Biotrol, Inc. Letter transmitting finalized report of February 19, 1986, visit. (Finalized report [II-B-3] is confidential).
II-C-20	08-May-86	C. Beall, MRI, to M. Popescu, Johnson & Johnson, International. Letter transmitting draft minutes of April 2, 1986, meeting for comment and review. (See II-E-101 for finalized minutes).
II-C-21	08-May-86	C. Beall, MRI, to D. Smith, Damas Corp. Letter transmitting draft minutes of April 2, 1986, meeting for comment and review. (See II-E-101 for finalized minutes).

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Number	Date of Document	Description
II-C-22	08-May-86	D. Markwordt, EPA:CPB, to R. Berglund, Union Carbide Corp. Acknowledgement of response to information request. (Identical letters sent to addressees listed on attachment to Berglund letter.)
II-C-23	13-May-86	S. Wyatt, EPA:CPB, to M. Popescu, Johnson & Johnson International. Requesting visit to New Brunswick, facility.
II-C-24	16-Jun-86	C. Beall, MRI, to M. Popescu, Johnson & Johnson International. Letter transmitting finalized minutes of April 2, 1986, meeting. (See II-E-101 for finalized minutes).
II-C-25	15-Jul-86	J. Farmer, EPA:ESED, to D. Clark, Abbott Laboratories. Section 114 information request. (Identical letters sent to addressees listed on attachment to Clark letter.)

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- II-C-26 S. Wyatt, EPA:CPB, to J. Lube, Iolab, Inc. No date. Confirmation of and information for the site visit scheduled for December 9, 1988.
- II-C-27 C. Beall, MRI, to G. Chaplick, Ethicon. July 23, 1986. Letter transmitting copies of draft site visit report for comment.
- II-C-28 J. Farmer, EPA:ESD, to L. Hecker, Abbott Laboratories. March 27, 1987. Section 114 Information Request. Identical letter sent to addresses listed on attachment to Hecker letter.
- II-C-29 J. Farmer, EPA:ESD, to L. Hecker, Abbott Laboratories. July 25, 1988. Section 114 Information Request. Identical letter sent to addresses listed on attachment to Hecker letter.
- II-C-30 D. Markwordt, EPA:CMS, to J. Jorkasky, Health Industry Manufacturers Association (HIMA). September 22, 1988. Providing agenda for presentation to HIMA members from October 31 through November 1, 1988, on ethylene oxide emissions project status.
- II-C-31 S. Wyatt, EPA:CPB, to R. Shumway, Medtronic Cardiopulmonary Systems. December 2, 1988. Letter verifying site visit at Anaheim, California, facility on December 9, 1988.
- II-C-32 D. Markwordt, EPA:CMS, to R. Shumway, Medtronic, Inc. January 6, 1989. Letter transmitting draft report of December 9, 1988, visit to Anaheim, California, facility for comment and review. (See II-B-27 for finalized report).
- II-C-33 D. Markwordt, EPA:CMS, to J. Burroughs, Seamless Division of Professional Medical Products, Inc. June 29, 1989. Letter regarding pre-test survey and test of Donaldson catalytic oxidation unit.
- II-C-34 S. Wyatt, EPA:CPB, to P. Adams, Isomedix Corporation. June 13, 1990. Letter verifying site visit at Spartanburg, South Carolina facility on June 14, 1990.

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- II-C-35 D. Markwordt, EPA:CMS, to M. White, Isomedix. December 4, 1990. Transmitting final trip report of visit to Spartanburg, South Carolina, facility on June 14, 1990.
- II-C-36 P. Redmond, MRI, to R. Stienss, Sterile Technologies, Inc. April 10, 1992 request for information regarding the use of air pollution control devices on aeration chambers with response received April 23, 1992.
- II-C-37 D. Hearne, MRI, to A. Ammerman, Griffith Micro Science. May 10, 1993. Letter responding to May 7, 1993 request for ethylene oxide emissions information.

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Number	Date of Document	Description
II-D-1	01-Jan-79	D. Knox, U.S. Department of Agriculture (USDA), to C. Beall, MRI. (Received December 16, 1985). Summary of current EtO usage for bee disease control in the U.S. (from USDA, State, and EPA cooperative assessment).
II-D-2	20-Jan-84	A. Buonicore, Chemrox, Inc., to D. Markwordt, EPA:CPB. Information and product brochure on control system.
II-D-3	27-Aug-84	A. Buonicore, Chemrox, Inc., to D. Markwordt, EPA:CPB. Comments on draft ethylene oxide report.
II-D-4	04-Sep-85	L. Stayner, NIOSH Centers for Disease Control, to D. Markwordt, EPA:CPB. Transmitting draft walk-through surveys of ethylene oxide users.
II-D-5	31-Oct-85	T. Urban, Chemrox, Inc., to R. Schell, EPA:PAB. Information on ethylene oxide control system.
I-D-6	20-Nov-85	S. Brown, Southeastern Library Network, Inc., to C. Beall, MRI. Transmitting list of Vacydyne fumigation systems installations.
II-D-7	02-Dec-85	W. Jessup, Smithsonian Institution, to C. Beall, MRI. Information on ethylene oxide survey and conference.
II-D-8	06-Dec-85	R. Manware, Occupational Safety and Health Administration, to S. Schliesser, MRI. Transmitting list of companies, other than health care facilities, involved in ethylene oxide sterilization or fumigation.
II-D-9	11-Dec-85	J. Fons, U.S. Department of Agriculture, to C. Beall, MRI. Information on ethylene oxide use at plant protection and quarantine facilities.
II-D-10	23-Dec-85	T. Lanier, U.S. Department of Agriculture (USDA), C. Beall, MRI. Contacts for information about USDA uses of ethylene oxide.
II-D-11	27-Dec-85	T. Black, Pennsylvania Bureau of Air Quality Control, to C. Green, MRI. Transmitting list of Pennsylvania facilities reporting ethylene oxide emissions.

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Number	Date of Document	Description
II-D-12	03-Jan-86	M. More, McCormick & Company, Inc., to C. Beall, MRI. Confirming January 16, 1986, visit to Hunt Valley, Maryland, facility.
II-D-13	07-Jan-86	C. Morris, North Carolina Department of Cultural Resources, to C. Beall, MRI. Comments on draft report of December 6, 1985, visit to Raleigh, North Carolina, facility.
II-D-14	21-Jan-86	W. Abrams, McCormick & Company, Inc., to C. Beall, MRI. Information on procedures for testing ethylene oxide control system.
II-D-15	21-Feb-86	J. Jorkasky, Health Industry Manufacturers Association (HIMA), to D. Markwordt, EPA:CPB. Transmitting responses to HIMA survey of ethylene oxide use and copy of questionnaire. (Confidential: Responses to survey by HIMA members).
I-D-16	04-Mar-86	P. Adams, Sterilization Services, to C. Beall, MRI. Comments on draft report of January 8, 1986, visit to Memphis, Tennessee, facility. (Confidential: 2-page letter; pp. 2, 7 of report).
II-D-17	06-Mar-86	T. White, Pharmaceutical Manufacturers Association (PMA), to C. Beall, MRI. Transmitting list of PMA members and summary of 1981 survey on ethylene oxide use.
II-D-18	11-Mar-86	C. Ochs, Jr., New Jersey Department of Environmental Protection, to C. Green, MRI. List of sources of ethylene oxide emissions in the State, including sterilizers.
II-D-19	11-Mar-86	M. More, McCormick & Company, to C. Beall, MRI. Comments on draft report of January 30, 1986, visit to Hunt Valley, Maryland, facility. (Confidential: 1-page letter)
II-D-20	12-Mar-86	M. More, McCormick & Company, to C. Beall, MRI. Additional comments on draft report of January 30, 1986, visit to Hunt Valley, Maryland, facility. (Confidential: 1-page letter)

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Number	Date of Document	Description
II-D-21	02-Apr-86	J. Kjellstrand, Micro-Biotrol, Inc., to C. Beall, MRI. Comments on draft report of February 19, 1986, visit to Smyrna, Georgia, facility. (Confidential: 1-page letter)
II-D-22	18-Apr-86	L. Rice, Food and Drug Administration, to D. Markwordt, EPA:CPB. Transmitting list of contract sterilizers.
II-D-23	22-May-86	M. Popescu, Johnson & Johnson International, to C. Beall, MRI. Comments on draft minutes of April 2, 1986, meeting.
II-D-24	03-Jun-86	D. Meo, III, DM3, to B. Nicholson, MRI. Transmitting Union Carbide brochure "EO/G" and Qazi-Ketcham article on EtO measuring technique.
II-D-25	19-Jun-86	D. Douglass, Mine Safety Appliances Company, to B. Coronna, MRI. Transmitting product literature on ethylene oxide control system.
II-D-26	26-Jun-86	M. Popescu, Johnson & Johnson International, to C. Beall, MRI. Transmitting report of March 1986 ethylene oxide emissions test.
II-D-27	27-Jun-86	D. Tiggelbeck, Tigg Corp., to B. Nicholson, MRI. Design and operating parameters of ethylene oxide and propylene oxide control system. (Confidential: 2-page letter)
II-D-28	20-Jul-86	Ethylene Oxide Sterilization Users to S. Wyatt, EPA:CPB. Responses to Section 114 information requests. (Confidential: 5 responses).
II-D-29	13-Aug-86	R. Weiss, E. R. Squibb & Sons, to D. Markwordt, EPA:CPB. Confirming extension for response to Section 114 information request.
II-D-30	15-Aug-86	W. Griffis, Chesebrough-Pond's, Inc., to D. Markwordt, EPA:CPB. Confirming extension for response to Section 114 information request.
II-D-31	15-Aug-86	R. Torrence, Arrow International, Inc., to B. Coronna, MRI. Revision to June 12, 1986, telecon.

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Number	Date of Document	Description
II-D-32	18-Aug-86	T. White, Pharmaceutical Manufacturers Association), to D. Beck, EPA:CPB. Transmitting summary of 1985 survey on purchase and disposal of seven compounds.
II-D-33	21-Aug-86	A. Santisi, Pfizer, Inc., Leeming/Pacquin Division, to D. Markwordt, EPA:CPB. Confirming extension for response to Section 114 information request.
II-D-34	21-Aug-86	S. Knox, The Upjohn Company, to B. Coronna, MRI. Comments on June 4, 1986, telecon.
II-D-35	27-Aug-86	T. Barry, Spicecraft, Inc., to D. Markwordt, EPA:CPB. Confirming extension for response to Section 114 information request.
II-D-36	05-Sep-86	H. Sinsabaugh, Gambro, Inc., to D. Markwordt, EPA:CPB. Confirming extension for response to Section 114 information request.
II-D-37	03-Oct-86	S. Smith, John Zink Company, to B. Coronna, MRI. Design, operating, and cost data and user list for flare equipment. (Confidential: 11-page letter; 3-page attachment; 14-page manual)
II-D-38	09-Oct-86	E. Obermiller, Clinton Corn Processing, to S. Srebro, MRI. Information that sterilizer will be shut down in about three months at Clinton, Iowa, facility.
II-D-39	29-Dec-86	D. Smith, Damas Corp., to S. Srebro, MRI. Comments on June 19, 1986, telecon and confirming that cost data are confidential. (See letter of January 15, 1988, releasing cost data from confidential status.)
II-D-40	31-Dec-86	F. Romano, T-Thermal, Inc., to S. Srebro, MRI. Comments on draft reports of November 10 and 20, 1986, telecons.
II-D-41	01-Jan-87	J. Jorjasky, Health Industry Manufacturers Association (HIMA), to D. Markwordt, EPA:CPB. Transmitting copy of HIMA correspondence to California Air Resources Board on draft ethylene oxide report.

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II-D-42	31-Mar-87	G. Barcus, Creative Care Systems, Inc., to V. Soltis, MRI. Comments on December 4, 1986, telecon.
II-D-43	07-Apr-87	D. Gehlhausen, Eli Lilly and Company, to V. Soltis, MRI. Comments on November 20, 1986, telecon.
II-D-44	15-Apr-87	P. Desai, Chemrox, Inc., to S. Srebro, MRI. Comments on January 20 and 22, 1987, telecons.
II-D-45	21-Apr-87	P. Desai, Chemrox, Inc., to S. Srebro, MRI. Concurrence on transfer of confidential materials to Research Triangle Institute.
II-D-46	21-Apr-87	D. Smith, Damas Corporation, to S. Srebro, MRI. Concurrence on transfer of confidential materials to Research Triangle Institute.
II-D-47	10-Jun-87	J. Peters, Environmental Tectonics Corp., to B. Nicholson, MRI. Transmitting information and product brochure on ethylene oxide emission control system.
II-D-48	17-Aug-87	C. Woltz, Linde Division--Union Carbide Corp., to G. Taylor, MRI. Comments on July 31, 1987, contact report.
II-D-49	17-Aug-87	J. Regan, Lederle Laboratories, to V. Soltis, MRI. Comments on March 13, 1987, telecon.
II-D-50	24-Aug-87	R. Proper, California Air Resources Board, to D. Markwordt, EPA:CPB. Comments on draft BID chapters and transmitting 1983 McCormick and Company, Salinas, California, test data.
II-D-51	25-Aug-87	R. Burley, Environmental Tectonics Corp., to S. Wyatt, EPA:CPB. Comments on draft BID chapters.
II-D-52	28-Aug-87	B. Meyer, Radiation Sterilizers, Inc., to M. Upchurch, MRI. Comments on July 24, 1987, telecon with A. Chin.
II-D-53	16-Sep-87	R. Pease, South Coast Air Quality Management District. Comments on draft BID chapters.

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II-D-54	17-Sep-87	P. Desai, Chemrox, Inc., to S. Wyatt, EPA:CPB. Comments on draft BID chapters and transmitting test report. (Confidential: Test report)
II-D-55	17-Sep-87	W. Sonntag, New York State Department of Environmental Conservation, to S. Wyatt, EPA:CPB. Comments on draft BID chapters.
II-D-56	21-Sep-87	D. Smith, Damas Corp., to S. Wyatt, EPA:CPB. Comments on draft BID chapters and transmitting summary of test data.
II-D-57	13-Nov-87	A. Allawi, Chemrox, Inc., to M. Upchurch, MRI. Comments on November 22, 1985, telecon with D. Newton, MRI.
II-D-58	15-Jan-88	D. Smith, Damas Corp., to D. Markwordt, EPA:CPB. Costs for Model 100 Tri-Phase scrubber and release of cost data from confidential status.

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- II-D-59 J. Tonkewicz, Ceilcote Company, to B. Friedman, MRI. November 13, 1985. Transmittal of product information.
- II-D-60 M. Bartlett, H. W. Andersen Products, Inc., to C. Green, MRI. January 16, 1986. Transmittal of product information.
- II-D-61 L. Rice, FDA:DRLB, to D. Markwordt, EPA:CMS. April 18, 1986. Transmittal of list of contract sterilizers.
- II-D-62 W. Berry, DARCO Water Systems, Inc., to S. Srebro, MRI. June 16, 1986. Transmittal of product information.
- II-D-63 J. Peters, Environmental Tectonics Corporation, to B. Nicholson, MRI. June 10, 1987. Transmittal of product information.
- II-D-64 J. Jorkasky, HIMA, to D. Markwordt, EPA:CMS. October 15, 1987. Comments from September 30, 1987, meeting with HIMA ethylene oxide task force.
- II-D-65 C. Olson, Donaldson Company, Inc. to D. Markwordt, EPA:CMS. December 15, 1987. Transmittal of test results for catalytic oxidation units.
- II-D-66 C. Olson, Donaldson Company, Inc. to D. Markwordt, EPA:CMS. March 21, 1988. Transmittal of development work on compact, low-cost ETO removal devices.
- II-D-67 R. Kruse, Advanced Air Technologies, Inc., to J. Farmer, EPA:ESD. May 31, 1988. Transmittal of product information.
- II-D-68 A. Allawi, Chemrox Inc., to J. Margeson, EPA:EMSL. July 7, 1988. Information concerning EO control device efficiency.
- II-D-69 J. Steger, Radian Corporation, to J. Margeson, EPA:EMSL. July 29, 1988. Comments on July 7, 1988 letter from A. Allawi, Chemrox, Inc.

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- II-D-70 D. Hammer, Advanced Air Technologies, Inc., to R. Nicholson, MRI. August 2, 1988. Comments on contact report dated June 14, 1988, and transmittal of State regulatory levels and flow sheet.
- II-D-71 C. Olson, Donaldson Company, Inc., to S. Srebro, MRI. November 9, 1988. Transmitting test data for low concentration ethylene oxide emission removal equipment.
- II-D-72 F. Edwards, Spicecraft, Inc., to S. Srebro, MRI. November 22, 1988. Discussion of chamber size and capacity.
- II-D-73 D. Meo, DM3, to S. Srebro, MRI. December 16, 1988. Transmittal of product information.
- II-D-74 D. Meo, DM3, to S. Srebro, MRI. January 13, 1989. Information on controlling ethylene oxide emissions from aeration facilities.
- II-D-75 J. Lube, IOLAB Intraocular (a Johnson and Johnson company), to D. Markwordt, EPA:CMS. January 24, 1989. Transmitting comments on draft trip report.
- II-D-76 J. Jorkasky, HIMA, to D. Markwordt, EPA:CMS. March 1, 1989. Transmitting a list of attendees participating in February 21, 1989, conference call.
- II-D-77 E. Wade, New York Department of Environmental Conservation, to S. Srebro, MRI. March 6, 1989. Restatement of New York State's policy regarding the control of ethylene oxide emissions.
- II-D-78 C. Olson, Donaldson Company, Inc. to S. Srebro, MRI. March 23, 1989. Transmitting unit and operating costs for catalytic oxidation unit controlling aeration room emissions.
- II-D-79 D. Hammer, Duall Division, Met-Pro Corporation, to S. Srebro, MRI. March 28, 1989. Transmitting unit and operating costs for a gas/solid reactor unit controlling aeration room emissions.

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II-D-80 R. Makinen, AMSCO, to S. Srebro, MRI. April 7, 1989. Letter transmitting a copy of "Determination of Amount of Ethylene Oxide vented Directly to Atmosphere via the Envirogard Stack by Small and Medium Eagle Gas Sterilizers," R. Makinen, March 27, 1989.

II-D-81 R. Wheeler, Concord/Portex, to J. Seitz, EPA:SSCD. June 28, 1989. Response to July 14, 1989, request for updated emissions data.

II-D-82 R. Torrence, Arrow International, Inc., to J. Seitz, EPA:SSCD. July 19, 1989. Response to July 14, 1989, request for updated emissions data.

II-D-83 S. Baker, The West Company, to J. Seitz, EPA:SSCD. July 25, 1989. Response to July 14, 1989 letter.

II-D-84 A. Stolarski, Medline Industries, Inc. to J. Seitz, EPA:SSCD. July 28, 1989. Response to July 14, 1989, request for updated emissions data.

II-D-85 J. Kiceina, C. R. Bard, Inc., to J. Seitz, EPA:SSCD. July 31, 1989. Response to July 14, 1989, request for updated emissions data.

II-D-86 C. Kohlmeier, Baxter Healthcare Corporation, to J. Seitz, EPA:SSCD. August 2, 1989. Response to July 14, 1989, request for updated emissions data.

II-D-87 P. Bewley, Johnson and Johnson, to J. Seitz, EPA:SSCD. August 4, 1989. Response to July 14, 1989, request for updated emissions data.

II-D-88 W. FitzGerald, Griffith Micro Science, Inc., to J. Seitz, EPA:SSCD. August 7, 1989. Response to July 14, 1989, request for updated emissions data.

II-D-89 C. Reese, Professional Medical Products, Inc., to J. Seitz, EPA:SSCD. August 7, 1989. Response to July 14, 1989, request for updated emissions data.

II-D-90 S. Baker, West Company, to D. Markwordt, EPA:CMS. August 29, 1989. Information on alternative control for ethylene oxide emissions.

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- II-D-91 D. Miller, Santa Maria Chili, Inc. to J. Seitz, EPA:SSCD. September 5, 1989. Response to July 14, 1989, request for updated emissions data.
- II-D-92 J. Roods, Sherwood Medical, to D. Markwordt, EPA:CMS. September 13, 1989. Response to July 14, 1989, request for updated emissions data.
- II-D-93 C. Olson, Donaldson Company, Inc., to S. Srebro, MRI. September 26, 1989. Transmitting results of pre-test survey for Seamless, Inc., facility in Ocala, Florida.
- II-D-94 R. Brandys, OEHCs, Inc., to D. Markwordt, EPA:CMS. October 24, 1989. Reasonably achievable ETO control level for Medline Industries.
- II-D-95 H. Negrete, Cal-Compac Foods, to D. Markwordt, EPA:CMS. October 30, 1989. Response to July 14, 1989, request for updated emissions data.
- II-D-96 T. Walsh, Donaldson Company, Inc., to D. Markwordt, EPA:CMS. November 15, 1989. Transmitting proposed test plan for Seamless facility.
- II-D-97 J. Jorkasky, Health Industry Manufacturers Association, to S. Srebro, MRI. December 1989. Notice of Confidentiality for information on use of rear chamber exhaust at medical equipment suppliers.
- II-D-98 D. Hammer, Michigan Science and Engineering Associates, to D. Markwordt, EPA:CMS. December 12, 1989. Letter transmitting test results for an AAT Safe-Cell Unit.
- II-D-99 J. Jorkasky, Health Industry Manufacturers Association, to D. Markwordt, EPA:CMS. December 15, 1989. Information concerning the extent of rear chamber exhausting.
- II-D-100 T. Walsh, Donaldson Company, Inc., to S. Srebro, MRI. January 12, 1990. Transmittal of field test report for Seamless, Inc., conducted December 4 through 6, 1989.

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- II-D-101 C. Olson, Donaldson Company, Inc., to D. Markwordt, EPA:CMS. August 2, 1990. Facsimile granting permission to release ETO information to the public.
- II-D-102 M. White, Isomedix, to S. Wyatt, EPA:CPB. September 20, 1990. Transmittal of comments on trip report from June 14, 1990 visit to Spartanburg, SC facility.
- II-D-103 F. Schmidt, Donaldson Company, Inc., to V. deOlloqui, MRI. October 12, 1990. Transmittal of test protocol and test results for EtO AbatorTM system.
- II-D-104 F. Schmidt, Donaldson Company, Inc., to D. Hearne, MRI. March 24, 1992. Transmittal of test protocol and test results for EtO AbatorTM system on aeration chambers.
- II-D-105 F. Schmidt, Donaldson Company, Inc., to D. Hearne, MRI. November 2, 1992. Transmittal of reference list of EtO AbatorTM customers.
- II-D-106 F. Schmidt, Donaldson Company, Inc., to D. Markwordt, EPA:CMS. January 12, 1993. Recommendations for monitoring and/or verifying compliance of EtO emissions control equipment.
- II-D-107 R. Walter, California Air Resources Board. To D. Markwordt, EPA:CPB. August 16, 1993. Proposed definitions for aeration.
- II-D-108 M. Corbin, Puget Sound Air Pollution Control Agency. to D. Markwordt, EPA:CPB. September 20, 1993. comments on Draft Ethylene Oxide Sterilization NESHAP.

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Number	Date of Document	Description
II-E-1	10-Oct-85	C. Beall, MRI, to G. Mills, Food and Drug Administration. Request for EO contract sterilizer information and registration list.
II-E-2	10-Oct-85	C. Beall, MRI, to J. Jorkasky, Health Industry Manufacturers Association. Contact information for list of EO sterilizers and plant locations.
II-E-3	11-Oct-85	C. Beall, MRI, to N. Dunning, Food and Drug Administration. Information on new registration system for all sterilizers and company list scheduled for 1986.
II-E-4	11-Oct-85	C. Beall, MRI, to A. Lowery, Food and Drug Administration (FDA). FDA list of health equipment manufacturers may contain EO sterilizers.
II-E-5	14-Oct-85	C. Green, MRI, to J. Hamlin, HW Anderson Products, Inc. Anderson manufacturers small EO sterilizers for which EO is supplied in glass ampules.
II-E-6	15-Oct-85	C. Beall, MRI, to V. Ross, Food and Drug Administration (FDA). FDA list contains contract EO sterilizers, not in-house sterile device manufacturers.
II-E-7	15-Oct-85	C. Beall, MRI, to M. More, McCormick & Company, Inc. Information that spice companies use in-house or contract fumigation.
II-E-8	17-Oct-85	C. Beall, MRI, to T. Burns, American Spice Trade Association, Inc. (ASTA). Information that formal request required for sterilizer list and that ASTA will review HIMA survey.
II-E-9	17-Oct-85	C. Beall, MRI, to G. Mills, Food and Drug Administration. Written request required for list of EO sterilizers.
II-E-10	18-Oct-85	C. Beall, MRI, to W. Morgenstern, Food and Drug Administration (FDA). Discussion about FDA/EPA liaison to handle request for sterilizers list.
II-E-11	24-Oct-85	C. Beall, MRI, to G. Mills, Food and Drug Administration. Discussion about estimates of number of EO sterilizers and report on libraries.

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Number	Date of Document	Description
II-E-12	29-Oct-85	C. Beall, MRI, to G. Mills, Food and Drug Administration (FDA). Information on FDA/EPA liaison officer.
II-E-13	06-Nov-85	E. Friedman, MRI, to J. Tonkewicz, Ceilcote Company. Discussion about sterilizer costs, scrubber materials and solutions, and request for product information.
II-E-14	14-Nov-85	S. Schliesser, MRI, to B. Manware, Occupational Safety and Health Administration (OSHA). OSHA will provide either list of EO users or of EO user companies that had commented on OSHA's EO regulations.
II-E-15	18-Nov-85	C. Beall, MRI, to M. Smith, EPA:OPTS. Discussion about EO sterilizers studies and contacts for information on beehive sterilization and libraries.
II-E-16	19-Nov-85	C. Beall, MRI, to T. Burns, American Spice Trade Association, Inc. (ASTA). Information that HIMA survey was mailed to ASTA members, although no response date requested.
II-E-17	19-Nov-85	C. Beall, MRI, to R. Jones, North Carolina Archives and Records (NCAR). Discussion about NCAR EO chamber and arrangements for plant visit.
II-E-18	20-Nov-85	C. Beall, MRI, to J. Green, North Carolina Department of Agriculture (NCDA). Discussion about data on NCDA EO chamber used for beehive sterilization included in Mitre Corp. report.
II-E-19	20-Nov-85	C. Beall, MRI, to S. Brown, Southeastern Library Network. List of locations of Vacudyne chambers sold through 1982 to be sent.
II-E-20	21-Nov-85	C. Beall, MRI, to C. Morrow, National Preservation Program. Contact information for EO chambers used in libraries and museums.
II-E-21	21-Nov-85	C. Beall, MRI, R. Arkin, Micro-Biotrol, Inc. Discussion about arrangements for visit to Smyrna, Georgia, facility and new control system installation.

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II-E-22	21-Nov-85	C. Beall, MRI, to B. Bunnell, Resources and Technical Services Division of American Library Association. Contact for information on use of EO chambers in museums.
II-E-23	21-Nov-85	C. Beall, MRI, to R. Goldgraben, MITRE Corp. Discussion about MITRE reports on EO and contacts for copies of reports and background documents.
II-E-24	21-Nov-85	C. Beall, MRI, to V. Wilcox, Smithsonian Museum. Discussion about shutdown of EO chambers in museums and use of sulfuryl fluoride in museum fumigation chambers.
II-E-25	21-Nov-85	C. Beall, MRI, to Sterilization Services of Georgia (SSG). Contact for information about SSG sterilization operations.
II-E-26	21-Nov-85	D. Newton, MRI, to T. Urgan, Chemrox, Inc. Requesting McCormick Spice Company, Baltimore, Maryland, test data.
II-E-27	22-Nov-85	D. Newton, MRI, to H. Markinson, Chemrox, Inc. Estimate of EO sources in U.S. and discussion about industry associations, visit candidates, and control system costs.
II-E-28	25-Nov-85	C. Beall, MRI, to M. McCann, Center for Occupational Hazards. Lists of museums using EO sterilization to be sent and contact information.
II-E-29	25-Nov-85	C. Beall, MRI, to D. Knox, Plant Protection Institute. Copy of draft report on 12 states that use EO in beehive sterilization to be sent.
II-E-30	26-Nov-85	C. Beall, MRI, to D. Schmelz, Sterilization Services of Georgia. Discussion about visit to Atlanta, Georgia, facility.
II-E-31	26-Nov-85	C. Beall, MRI, to J. Kjellstrand, Micro-Biotrol, Inc. Procedures to request visit to Smyrna, Georgia, facility.
II-E-32	26-Nov-85	C. Beall, MRI, to J. Fons, Hoboken Methods Development Center. Contact for information on plant fumigation.

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Number	Date of Document	Description
II-E-33	27-Nov-85	C. Beall, MRI, to W. Jessup, Smithsonian Museum. Contact information for list of museums using EO sterilizers.
II-E-34	27-Nov-85	C. Beall, MRI, to D. Sluyter, MITRE Corp. Copies of the 1980 MITRE reports of the preliminary benefits analysis for cosmetics industry, museums, transportation sites, libraries, and research laboratories to be sent.
II-E-35	02-Dec-85, 09-Dec-85	C. Beall, MRI, to M. More, McCormick Spice Company. Arrangements for visit to Baltimore, Maryland, facility.
II-E-36	03-Dec-85	C. Beall, MRI, to P. Adams, Sterilization Services of Tennessee. Discussion about Sterilization Services facilities in Georgia, California, and Tennessee.
II-E-37	03-Dec-85	C. Beall, MRI, to T. Murphy, Abbott Laboratories. Discussion about plant visit and response to HIMA questionnaire.
II-E-38	04-Dec-85	C. Beall, MRI, to T. Murphy, Abbott Laboratories. Discussion about visit and HIMA survey response.
II-E-39	10-Dec-85	C. Beall, MRI, to J. Fons, Hoboken Methods Development Center. Discussion about plant fumigation activities at US ports of entry.
II-E-40	10-Dec-85	C. Beall, MRI, to D. Knox, United States Department of Agriculture. Copy of table in Rebuttal Presumption Against Registration containing beehive sterilization information to be sent.
II-E-41	11-Dec-85	C. Beall, MRI, to P. Adams, Sterilization Services of Tennessee. Arrangements for visit to Memphis, Tennessee, facility.
II-E-42	11-Dec-85	C. Beall, MRI, to R. Herring, North Carolina Division of Health Service. Discussion about two EO chambers in North Carolina.
II-E-43	12-Dec-85	C. Green, MRI, to E. Anna, New York Department of Environmental Conservation. Procedures and charges for EO related information.

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II-E-44	13-Dec-85	C. Green, MRI, to L. Daniels, North Carolina Division of Environmental Management. Inventory of unconfirmed EO emission sources available.
II-E-45	13-Dec-85	C. Green, MRI, to Mr. Black, Pennsylvania Bureau of Air Quality. Discussion about EO emission inventory that may be available.
II-E-46	13-Dec-85	C. Green, MRI, to B. Boissell, Massachusetts Division of Air Quality Engineering. All EO emission source information is available on EPA NETS database.
II-E-47	13-Dec-85	C. Green, MRI, to R. Prober, California Air Resources Board (CARB). EO emission source data from CARB hazardous and toxic air pollutant inventory will be sent.
II-E-48	16-Dec-85	C. Green, MRI, to D. Penzak, Illinois Environmental Protection Agency. Division of Air Pollution has two EO user or producing facilities on record: Baxter Travenol and Abbott Laboratories.
II-E-49	17-Dec-85	C. Beall, MRI, to J. Cooper, National Welders Supply. Size of EO tank purchased by North Carolina Archives and Records.
II-E-50	17-Dec-85	C. Beall, MRI, to M. More, McCormick Spice. Site visit date indefinite.
II-E-51	17-Dec-85	C. Beall, MRI, to A. Schlett, Croll-Reynolds Company, Inc. Discussion about EO chambers with Croll-Reynolds control systems and potential site visit candidates.
II-E-52	18-Dec-85	C. Beall, MRI, to M. More, McCormick Spice. Discussion about chamber operation during January 16, 1986, visit.
II-E-53	18-Dec-85	C. Green, MRI, to D. Brandt, Michigan Air Quality Division. Although State has worked with EO emission sources, no inventory of specific air emission sources has been compiled.
II-E-54	19-Dec-85	C. Beall, MRI, to V. Adams, Old Dartmouth Historical Society. List of museums in the New England region that use EO to be sent.

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II-E-55	19-Dec-85	C. Beall, MRI, to L. Zycherman, Museum of Modern Art. No information newer than 1981 is available on pest control in museums.
II-E-56	19-Dec-85	C. Beall, MRI, to M. McCann, Center of Occupational Hazards. Report "Pest Control in Museums" contains survey results, not locations; contact information.
II-E-57	19-Dec-85	C. Beall, MRI, to R. Schrock, Association of Systematics Collections. "Pest Control in Museums" does not contain identification of museums; contact information.
II-E-58	08-Jan-86	C. Green, MRI, to J. McDaniel, Environmental Epidemiology. Survey of veterinary clinics results to be sent.
II-E-59	09-Jan-86	C. Beall, MRI, to G. Merrill, United States Department of Agriculture. No information on fumigation of fruits and vegetables is available; Baltimore port does not use EO for fumigation.
II-E-60	13-Jan-86	C. Green, MRI, to C. Marcinuk, H.W. Anderson Product, Inc. Information and maintenance book on Anderson EO sterilizers to be sent.
II-E-61	13-Jan-86	C. Green, MRI, to T. Glover, University of Florida. Information about operation and use of Castle EO sterilizer at the College of Veterinary Medicine.
II-E-62	14-Jan-86	C. Green, MRI, to P. Whitford, Texas A&M University. Information about operation of AMSCO EO sterilizer in the College of Veterinary Medicine.
II-E-63	14-Jan-86	C. Green, MRI, to B. Hitchins, Colorado State University. Information on EO sterilization using AMSCO EO sterilizer.
II-E-64	22-Jan-86	B. Boomer, MRI, to J. Taylor, Georgia Environmental Protection Division. Discussion about cases involving sterilizer operations without control systems in Georgia; hospitals, EO packaging, or ethoxylation facilities have not been investigated.

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II-E-65	22-Jan-86	B. Boomer, MRI, to J. Rickun, Wisconsin Department of Natural Resources. State is not up to date on EO emission sources.
II-E-66	23-Jan-86	B. Boomer, MRI, to D. Farley, West Virginia Air Pollution Control Commission. No EO problems identified in in-progress survey of major manufacturers.
II-E-67	23-Jan-86	B. Boomer, MRI, to M. Osborn, Virginia Air Pollution Control Commission. No EO problems identified in in-progress source survey of 60 chemicals.
II-E-68	27-Jan-86	C. Beall, MRI, to T. White, Pharmaceuticals Manufacturers Association (PMA). Discussion about EO use in the pharmaceutical industry and list of PMA members to be sent.
II-E-69	28-Jan-86	D. Newton, MRI, to A. Plant, Exxon U.S.A. Exxon does not use EO; contact information.
II-E-70	31-Jan-86	C. Beall, MRI, to J. Kjellstrand, Micro-Biotrol, Inc. Discussion about conditions and dates for plant visit to Smyrna, Georgia, facility.
II-E-71	05-Feb-86	C. Beall, MRI, to R. Bliss, C. R. Bard, Inc. Formal request required for scheduling plant visit.
II-E-72	06-Feb-86	C. Beall, MRI, to F. Bonanni, C. R. Bard, Inc. Due to restructuring of the company, plant visit to Covington, Georgia, facility is not feasible; C. R. Bard does in-house sterilization only.
II-E-73	13-Feb-86	D. Newton, MRI, to T. Urban, Chemrox, Inc. Discussion about disposal of ethylene glycol waste from scrubber units.
II-E-74	27-Feb-86	E. Friedman, MRI, to D. Colglazier, Old Sturbridge Village (OSV). Discussion about the OSV uncontrolled sterilizer chamber.
II-E-75	27-Feb-86	D. Newton, MRI, to H. Braly, Baseline Industries. Discussion about Baseline Industries EO monitoring equipment and visit to MRI offices.

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II-E-76	27-Feb-86	D. Newton, MRI, to D. Clark, ADT Lab Industries. Information about in-house sterilization at Lakeville, Minnesota, facility.
II-E-77	27-Feb-86	D. Newton, MRI, to D. Clarke, Specialty Gas, Inc. (SG). SG performs contract sterilization of medical equipment using water-sealed pump and baffle tank to remove EO from sterilizer exhaust.
II-E-78	28-Feb-86	D. Newton, MRI, to J. Webb, A. E. Staley Manufacturing Company (AESMC). Discussion about EO use at AESMC and contact information.
II-E-79	28-Feb-86	C. Beall, MRI, to A. Chin, Radiation Sterilizers, Inc. (RS). Discussion about RS facilities and use of radiation for sterilization.
II-E-80	04-Mar-86	C. Beall, MRI, to Secretary, Seamless Hospital Products. Company uses EO for sterilization.
II-E-81	04-Mar-86	C. Beall, MRI, to R. Hernandez, Santa Maria Chili, Inc. Use of EO for chiles fumigation and status of information request.
II-E-82	04-Mar-86	C. Beall, MRI, to M. Grove, Portex, Inc. Planned phase-out of EO used for sterilizing disposable medical supplies manufactured by Portex.
II-E-83	07-Mar-86	E. Friedman, MRI, to E. McAlvanah, North American Sterilization and Packaging Company. Information that company is a contract sterilizer; procedures for further information.
II-E-84	11-Mar-86	D. Newton, MRI, to Receptionist, Altair Corp. Information that Vacudyne Corp., an Altair subsidiary, uses EO and has responded to HIMA survey.
II-E-85	11-Mar-86	D. Newton, MRI, to Receptionist, Aesthetech Corp. All sterilization conducted by contractor.
II-E-86	11-Mar-86	D. Newton, MRI, to D. Freitag, Andover-Harvard Theological Library. Information on operation and use of Vacudyne fumigation chamber.

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II-E-87	12-Mar-86	E. Friedman, MRI, to J. Pate, Office of Safety Programs. Information that Smithsonian Museums is currently building new sulphuryl fluoride chamber to replace two EO chambers.
II-E-88	13-Mar-86	D. Newton, MRI, to L. Glastette, American Edwards Laboratories. Discussion about in-house sterilization, impact of regulations on the industry, and response to HIMA survey.
II-E-89	13-Mar-86	E. Friedman, MRI, to D. Patton, Old Mansion, Inc. Discussion about EO sterilization of coffee, tea, a spices and venting of emissions to water scrubber.
II-E-90	13-Mar-86	C. Green, MRI, to C. Predmore, Sherwood Medical Hospital Products Division (formerly Cheseborough-Pond's, Inc. Information about operation, use, and control of EO sterilizer.
II-E-91	14-Mar-86	D. Newton, MRI, to J. Purvis, A. C. Legg Packaging Company. Discussion about contract sterilization/radiation of spices, industry trend to radiation, and FDA policies.
II-E-92	17-Mar-86	D. Newton, MRI, to M. Meana, AMTRAK. Discussion about AMTRAK's use of EO to fumigate passenger cars; contact information.
II-E-93	17-Mar-86	D. Newton, MRI, to L. Hejel, Baltimore Spice Company--Division of Durkee Foods. Procedures for information.
II-E-94	18-Mar-86	D. Newton, MRI, to W. Steinhardt, Creative Care Systems, Inc. Operation and use of in-house and contract sterilization system.
II-E-95	19-Mar-86	D. Newton, MRI, to S. Lockitski, Durkee Industrial Foods Group. Information about sterilization of spices at Cleveland, Ohio, facility.
II-E-96	19-Mar-86	D. Newton, MRI, to K. Jones, ETO Sterilization, Inc. Information on operation and use of sterilizer for contract spice applications.
II-E-97	20-Mar-86	D. Newton, MRI, to L. Castagna, Action Medical Systems, Inc. Information about in-house and contract sterilization operations.

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II-E-98	20-Mar-86	D. Newton, MRI, to G. Jones, Argon Medical Corp. Operation and use of two in-house sterilization chambers.
II-E-99	20-Mar-86	D. Newton, MRI, to W. Dawson, Daig Corp. Information about Vacudyne sterilizer used in medical equipment manufacture.
II-E-100	20-Mar-86	D. Newton, MRI, to J. Baker, American Medical International (AMI). Contact for information about hospitals that AMI owns or operates, some of which perform EO sterilization.
II-E-101	30-Apr-86	C. Beall, MRI, to D. Markwordt, EPA:CPB. Meeting minutes: Damas Corp. and Johnson & Johnson International on April 2, 1986.
II-E-102	09-May-86	D. Newton, MRI, to M. Popescu, Johnson & Johnson, International. Discussion about EO sterilization processes and emissions and contact information.
II-E-103	03-Jun-86	B. Coronna, MRI, to R. Leonard, Becton-Dickinson and Company (B-D). Discussion about the current use of B-D aeration chamber.
II-E-104	04-Jun-86	B. Coronna, MRI, to G. Putney, American Edwards Laboratories. Discussion about the current use of aeration chamber.
II-E-105	04-Jun-86	B. Coronna, MRI, to H. Hyde, Cordis Corp. Dimensions of planned aeration room.
II-E-106	04-Jun-86	B. Coronna, MRI, to S. Knox, Upjohn Company. Information that degassing is performed in the sterilization chambers, not an aeration chamber.
II-E-107	05-Jun-86	B. Coronna, MRI, to S. Donatiello, Mallinckrodt, Inc. Oversized chambers in use at North Argyle, New York, facility.
II-E-108	10-Jun-86	S. Srebro, MRI, to W. Petzold, Chemical Waste Management, Inc. Costs to dispose of 10 to 1,000 55-gal drums/year containing 64 percent ethylene glycol.
II-E-109	10-Jun-86	B. Coronna, MRI, to J. Regan, Lederle Laboratories. Degassing is done within the sterilization chamber.

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II-E-110	10-Jun-86	B. Coronna, MRI, to H. Rothman, Ray-Solv. Discussion about use, efficiencies, and costs of carbon adsorption for EO/air mixtures.
II-E-111	11-Jun-86	S. Srebro, MRI, to R. Hadden, City of Atlanta Water and Pollution Control. Costs related to disposing of 64 percent solution of ethylene glycol.
II-E-112	11-Jun-86	S. Srebro, MRI, to R. Thomas, Memphis, Tennessee, Public Works Division (PWD). Information that the PWD would accept small amounts (one 55-gal drum annually) of 64 percent ethylene glycol from Memphis sewer service customers only.
II-E-113	12-Jun-86	B. Coronna, MRI, to R. Torrence, Arrow International, Inc. Discussion about the current use of aeration rooms.
II-E-114	12-Jun-86	S. Srebro, MRI, to L. Holt, Raleigh, North Carolina, Public Utilities Department. Costs for disposal of 64-percent ethylene glycol, discharge of which the Raleigh facility does not normally allow.
II-E-115	13-Jun-86	B. Coronna, MRI, to J. Wetzel, Calgon Carbon Corp. Discussion about use and efficiencies of carbon adsorption for EO/air mixtures.
II-E-116	13-Jun-86	S. Srebro, MRI, to J. Mixon, Darco Water System Inc. Discussion about costs associated with dechlorination filters.
II-E-117	13-Jun-86	B. Coronna, MRI, to P. Summerlin, Edward Weck and Company, Inc. Discussion about current use of the aeration room.
II-E-118	13-Jun-86	S. Srebro, MRI, to E. Kellar, Environmental Science and Engineering, Inc. Disposal of 64-percent ethylene glycol at municipal wastewater treatment facilities.
II-E-119	13-Jun-86	B. Coronna, MRI, to J. Kjellstrand, Micro-Biotrol, Inc. Discussion about the current use of the aeration room.

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II-E-120	13-Jun-86	S. Srebro, MRI, to J. Smith, Southchem. Prices for 55-gal drum containing 50-percent sodium hydroxide.
II-E-121	16-Jun-86	S. Srebro, MRI, to M. Popescu, Johnson & Johnson International, Inc. Discussion about uses, costs, and design specifications associated with the a EO scrubber.
II-E-122	16-Jun-86	S. Srebro, MRI, to G. Smith, Wright Chemical Corp. Prices for 55-gal drum containing 50-percent electrolyte grade sulfuric acid.
II-E-123	17-Jun-86	S. Srebro, MRI, to T. Ronca, Burrton Medical, Inc. Discussion about disposal of aqueous ethylene glycol solution.
II-E-124	17-Jun-86	S. Srebro, MRI, to R. Renner, Deseret Medical, Inc. Information about ethylene glycol disposal method and hauling costs.
II-E-125	17-Jun-86	S. Srebro, MRI, to H. Johantgen, Ethicon, Inc. Discussion about ethylene oxide scrubber operation and associated disposal problems.
II-E-126	17-Jun-86	S. Srebro, MRI, to S. Byrd, Worth Chemicals. Prices for 55-gal drum containing either 50 percent electrolyte grade sulfuric acid or 50 percent sodium hydroxide.
II-E-127	18-Jun-86	S. Srebro, MRI, to T. Ronca, Burrton Medical, Inc. Discussion about disposal of aqueous ethylene glycol solution.
II-E-128	18-Jun-86	B. Coronna, MRI, to A. Iannuzzi, Ethicon, Inc. Discussion about current use of aeration rooms.
II-E-129	18-Jun-86	S. Srebro, MRI, to R. Ray, Southchem. Prices for 55-gal drum containing 50-percent sulfuric acid.
II-E-130	19-Jun-86	S. Srebro, MRI, to D. Smith, Damas Corp. Costs of EO scrubber systems.
II-E-131	20-Jun-86	B. Coronna, MRI, to R. Byron, Tigg Corp. Discussion about aeration room control technology (Confidential).

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II-E-132	20-Jun-86	S. Srebro, MRI, to P. Zacario, Damas Corp. Discussion about design specification for the Damas Tri-Phase EO scrubber.
II-E-133	24-Jun-86	S. Srebro, MRI, to M. DeMarco, Johnson & Johnson Products, Inc. Discussion about operation of North Brunswick, New Jersey, EO scrubber and disposal into sewer of ethylene glycol.
II-E-134	26-Jun-86	S. Srebro, MRI, to R. Immerman, ORE Corp. Information about ethylene glycol recovery.
II-E-135	27-Jun-86	S. Srebro, MRI, to R. Hadley, High Valley Chemicals. Discussion about the costs and requirements for disposing of ethylene glycol.
II-E-136	30-Jun-86	S. Srebro, MRI, to G. Meyer, Valleylab, Inc. Discussion about responses to HIMA survey and operation of EO scrubber.
I-E-137	23-Jul-86	B. Coronna, MRI, to J. Hope, Central Transport, Inc. Costs for shipping ethylene glycol for 1,000 miles.
II-E-138	23-Jul-86	B. Coronna, MRI, to D. Kabasa, Kenan Transport Inc. Costs for shipping ethylene glycol for 1,000 miles.
II-E-139	23-Jul-86	B. Coronna, MRI, to R. Gambill, Pilot Freight Carriers, Inc. Costs for shipping ethylene glycol for 1,000 miles.
II-E-140	19-Aug-86	B. Coronna, MRI, to D. Kabasa, Kenan Transport Inc. Costs increases since 1984 for shipping ethylene glycol for 1,000 miles.
II-E-141	19-Aug-86	B. Coronna, MRI, to R. Gambill, Pilot Freight Carrier, Inc. Costs increases since 1984 for shipping ethylene glycol for 1,000 miles.
II-E-142	07-Oct-86	B. Coronna, MRI, to Mr. Barrett, New York Department of Agriculture and Market (NYDAM). The NYDAM does not use EO; status of information request.

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II-E-143	07-Oct-86	B. Coronna, MRI, to Mr. Kosean, Oregon Department of Agriculture (ODA). The ODA does not use EO; status of information request.
II-E-144	07-Oct-86	B. Coronna, MRI, to J. Craven, University of Michigan (UM). The UM does not use EO; status of information request.
II-E-145	10-Nov-86	S. Srebro, MRI, to F. Romano, T-Thermal, Inc. Discussion about the use of a T-Thermal incinerator to control EO/dichlorodifluoromethane emissions.
II-E-146	10-Nov-86	M. Cassidy, MRI, to M. Cochran, West Virginia Department of Agriculture. Discussion about honeybee fumigation chamber.
II-E-147	10-Nov-86	M. Cassidy, MRI, to H. Powers, Virginia Department of Agriculture and Consumer Services (VDACS). Discussion about VDACS fumigation chamber operation use, and control.
II-E-148	12-Nov-86	M. Cassidy, MRI, to G. Karr, Alabama Department of Agriculture. Operation and use of fumigation chamber.
II-E-149	12-Nov-86	M. Cassidy, MRI, to I. Smith, Jr., Maryland Department of Agriculture. Use of fumigation chamber.
II-E-150	12-Nov-86	M. Cassidy, MRI, to J. Greene, North Carolina Department of Agriculture. Operation and use of fumigation chamber.
II-E-151	12-Nov-86	M. Cassidy, MRI, to J. Hammett, Tennessee Department of Agriculture. Operation and use of fumigation chamber.
II-E-152	14-Nov-86	S. Srebro, MRI, to J. Dzwierzynski, Vacudyne Corp. Discussion about the use of a Vacudyne EO/dichlorodifluoromethane reclamation system to recover only CFC-12 emissions.
II-E-153	20-Nov-86	M. Cassidy, MRI, to D. Gehlhausen, Eli Lilly & Company. Clarification of responses to information request.

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II-E-154	20-Nov-86	M. Cassidy, MRI, to R. Weiss, E. R. Squibb & Sons. Size of sterilizer chamber at North Brunswick, New Jersey, facility.
II-E-155	20-Nov-86	M. Cassidy, MRI, to D. Boyd, Lukens Corp. Clarification of responses to information request.
II-E-156	20-Nov-86	S. Srebro, MRI, to F. Romano, T-Thermal, Inc. Discussion about use of incinerator for combustion of 12/88 EO/dichlorodifluoromethane.
II-E-157	20-Nov-86	M. Cassidy, MRI, to R. Devan, Arkansas History Commission. Stack height confirmed to be 120 feet above ground level.
II-E-158	24-Nov-86	M. Cassidy, MRI, to G. Payne, Old Mansion, Inc. Clarification of responses to information request.
II-E-159	24-Nov-86	V. Soltis, MRI, to T. Piazza, Seamless Hospital Products. Clarification of amount of EO used per year and emission estimates.
II-E-160	24-Nov-86	V. Soltis, MRI, to D. Clarke, A.D.T. Lab Industries, Inc. Clarification of Section 114 response (Confidential).
II-E-161	25-Nov-86	M. Cassidy, MRI, to W. Dawson, Daig Corp. Clarification of responses to information request.
II-E-162	25-Nov-86	M. Cassidy, MRI, to C. Predmore, Hospital Products Division of Sherwood Medical. Clarification of responses to information request.
II-E-163	26-Nov-86	M. Cassidy, MRI, to F. Lamb, Cal-Compack Food. Clarification of responses to information request.
II-E-164	26-Nov-86	V. Soltis, MRI, to L. Price, Cook, Inc. Clarification of responses to information request.
II-E-165	26-Nov-86	M. Cassidy, MRI, to T. Barry, Spicecraft. Discussion about Spicecraft sterilization process.
II-E-166	26-Nov-86	J. Glanville, MRI, to R. Greeno, Vacudyne Corp. Operating parameters and design data for Vacudyne reclamation system.

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II-E-167	03-Dec-86	V. Soltis, MRI, to R. Jones, The Jackson Laboratory. Clarification of responses to information request.
II-E-168	04-Dec-86	V. Soltis, MRI, to G. Barcus, Creative Care Systems, Inc. Clarification of responses to information request.
II-E-169	29-Dec-86	S. Srebro, MRI, to B. Brunson, National Distillers and Chemical Corp. (NDCC). NDCC does not use EO in its sterilization process.
II-E-170	20-Jan-87	S. Srebro, MRI, to P. Desai, Chemrox, Inc. Discussion about Chemrox reclamation system and nitrogen/EO mixture for sterilization.
II-E-171	22-Jan-87	S. Srebro, MRI, to C. Woltz, Union Carbide Corp. Discussion about the prices of pure EO 12/88 (EO/CFC-12), and 10/90 (EO/CO2).
II-E-172	03-Feb-87	S. Srebro, MRI, to D. Matthews, Vacuadyne Corp. Clarification about liquid-gas separator located on a vacuum pump assembly that absorbs EO with little conversion to ethylene glycol.
II-E-173	10-Feb-87	J. Glanville, MRI, to C. Woltz, Union Carbide Corp. Discussion about the flammability of EO/CO2 mixtures greater than 20 percent EO.
II-E-174	18-Feb-87	V. Soltis, MRI, to J. Patzman, Barnes Hind, Inc. Clarification of responses to information request.
II-E-175	02-Mar-87	R. Crume, MRI, to P. Adams, Sterilization Services of Tennessee. Discussion about projected growth in contract sterilization and salvage value of sterilization chambers.
II-E-176	02-Mar-87	V. Soltis, MRI, to J. Jorkasky, Health Industry Manufacturers Association. Discussion about industry size, trends in use of EO and Cobalt-60 radiation, and alternatives to EO sterilization.

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II-E-177	16-Apr-87	L. McNeilly, RTI, to M. DeMarco, Johnson and Johnson, Inc. Ratio of sterilization to production costs and scrubber capital and operating costs.
II-E-178	07-May-87	S. Srebro, MRI, to J. Dzwierzynski, Vacuadyne Corp. Discussion about vacuum pump systems used by facilities with Vacuadyne condensation/reclamation units.
II-E-179	13-May-87	V. Soltis, MRI, to J. Regan, Lederle Laboratories Division--American Cyanamid Company. Efficiency of scrubber used at Manatu, Puerto Rico, facility.
II-E-180	08-Jul-87	V. Soltis, MRI, to B. Duck, John Zink Company. Discussion about flares used to control EO/ carbon dioxide emissions.
II-E-181	24-Jul-87	M. Upchurch, MRI, to A. Chin, Radiation Sterilizers, Inc. Discussion about gamma radiation process, growth, costs, and efficacy compared to EO sterilization.
II-E-182	31-Jul-87	G. Taylor, MRI, to S. Conviser and C. Woltz, Linde Division--Union Carbide Corp. Discussion of operation and feasibility of using 10/90 EO/CO2 in existing 12/88 EO/CFC-12 chambers.

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II-E-183 C. Green, MRI, to V. Buffaloe, Cobe Laboratories.
No date. Telecon: Information concerning EO use.

II-E-184 C. Green, MRI, to R. Olcerost, Johns Hopkins
Hospital. No date. Telecon: Information
concerning EO emission control devices fro hospital
EO sterilizers.

II-E-185 A. Meiners, MRI, to C. Darvin, EPA:AEERL. No date.
Telecon: Discussion with J. McDonough of MSA.

II-E-186 C. Green, MRI, to B. Dennis, Duke University
Medical Center. October 11, 1985. Telecon:
Information concerning EO sterilizers and
coordinating a site visit.

II-E-187 C. Green, MRI, to J. Whither and S. Word, Rex
Hospital. October 11, 1985. Telecon: Information
concerning EO use.

II-E-188 C. Green, MRI, to B. Tomazewski, Castle, Division
of Sybron Corporation. October 15, 1985. Telecon:
Request for information concerning the manufacture
of EO sterilizers and emission control devices.

II-E-189 C. Green, MRI, to C. Dibede, Vernitron Medical
Products. October 15, 1985. Telecon: Request for
information concerning the manufacture of EO
sterilizers and emission control devices.

II-E-190 C. Green, MRI, to J. DeMence, NIEHS. October 16,
1985. Telecon: Information concerning EO
sterilizer use.

II-E-191 C. Green, MRI, to W. Lennon, AMSCO. October 25,
1985. Telecon: Information on EO sterilizer use
at Wake Medical Center and North Carolina Memorial
Hospital.

II-E-192 C. Green, MRI, to R. Sheridan, LA City - USC
Medical Center. November 5, 1985. Telecon:
Information pertaining to EO use and consumption at
large surgical hospitals.

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II-E-193 C. Green, MRI, to B. Collins, Castle. November 6, 1985. Telecon: Information concerning the use of a gas separator on the Castle EO sterilizers.

II-E-194 C. Green, MRI, to Local Temporary Services Contractors. November 11, 1985. Telecon: Cost estimates for employing data entry services.

II-E-195 C. Green, MRI, to C. Moore, Castle, Division of Sybron. November 12, 1985. Telecon: Information concerning EO sterilizer models manufactured by Castle.

II-E-196 C. Green, MRI, to Data Processing Companies. November 13, 1985. Telecon: Cost estimates for employing data processing services.

II-E-197 C. Green, MRI, to R. Schriever, Baylor University Medical Center. November 19, 1985. Telecon: Information pertaining to EO use and consumption at large surgical hospitals.

II-E-198 C. Green, MRI, to M. James, Bellevue Hospital Center. November 20, 1985. Telecon: Information pertaining to EO use and consumption at large surgical hospitals.

II-E-199 C. Green, MRI, to R. Olcerost, Johns Hopkins Hospital. November 20, 1985. Telecon: Information pertaining to EO use and consumption at large surgical hospitals.

II-E-200 C. Green, MRI, to A. Flaherty, Massachusetts General Hospital. November 20, 1985. Telecon: Information pertaining to EO use and consumption at large surgical hospitals.

II-E-201 C. Green, MRI, to R. Thompson, Mt. Sinai Hospital. November 21, 1985. Telecon: Information pertaining to EO use and consumption at large surgical hospitals.

II-E-202 C. Green, MRI, to B. Gordon, Society of New York Hospital. November 21, 1985. Telecon:

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Information pertaining to EO use and consumption at large surgical hospitals.

- II-E-203 C. Beall, MRI, to D. Knox, Plant Protection Institute, USDA. November 25, 1985. Telecon: Information pertaining to national EO fumigation of beehives.
- II-E-204 C. Green, MRI, to Z. Heavener, Baptist Memorial Hospital. December 3, 1985. Telecon: Information pertaining to EO use and consumption at large surgical hospitals.
- II-E-205 C. Green, MRI, to F. Bridgeforth, Barnes Hospital. December 3, 1985. Telecon: Information pertaining to EO use and consumption at large surgical hospitals.
- II-E-206 C. Green, MRI, to M. Larkin, James M. Jackson Memorial Hospital. December 3, 1985. Telecon: Information pertaining to EO use and consumption at large surgical hospitals.
- II-E-207 C. Green, MRI, to E. Riley, Cleveland Clinic Hospital. December 4, 1985. Telecon: Information pertaining to EO use and consumption at large surgical hospitals.
- II-E-208 C. Green, MRI, to G. Boone, Kings County Hospital Center. December 4, 1985. Telecon: Information pertaining to EO use and consumption at large surgical hospitals.
- II-E-209 C. Green, MRI, to R. Good, Methodist Hospital of Indiana. December 4, 1985. Telecon: Information pertaining to EO use and consumption at large surgical hospitals.
- II-E-210 C. Green, MRI, to D. Diggins, Wilmington Medical Center. December 4, 1985. Telecon: Information pertaining to EO use and consumption at large surgical hospitals.
- II-E-211 C. Green, MRI, to M. Picot, Charity Hospital of Louisiana. December 5, 1985. Telecon:

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Information pertaining to EO use and consumption at large surgical hospitals.

- II-E-212 C. Green, MRI, to M. Lenick, Rush-Presbyterian-St. Lukes Med. Center. December 5, 1985. Telecon: Information pertaining to EO use and consumption at large surgical hospitals.
- II-E-213 C. Green, MRI, to D. Casper, St. Mary's Hospital of Rochester. December 5, 1985. Telecon: Information pertaining to EO use and consumption at large surgical hospitals.
- II-E-214 C. Green, MRI, to M. Murphy, University of Iowa Hospital and Clinics. December 5, 1985. Telecon: Information pertaining to EO use and consumption at large surgical hospitals.
- II-E-215 C. Green, MRI, to K. Ochs, APEDS. December 13, 1985. Telecon: Request for information pertaining to EO emission sources.
- II-E-216 C. Green, MRI, to P. Henry, Texas Air Control Board. December 13, 1985. Telecon: Request for information pertaining to EO emission sources.
- II-E-217 C. Green, MRI, to Dr. H. King, School of Veterinary Medicine. January 10, 1986. Telecon: Information concerning the use of EO sterilizers.
- II-E-218 C. Green, MRI, to A. Strupp, University of Georgia. January 13, 1986. Telecon: Information concerning the use of EO sterilizers.
- II-E-219 C. Green, MRI, to Major A. Aiken, USAMEDDAC. January 13, 1986. Telecon: Information concerning the use of EO sterilizers in military hospitals, dental clinics, and veterinary clinics.
- II-E-220 C. Green, MRI, to G. Anders, Iowa State University. January 14, 1986. Telecon: Information concerning the use of EO sterilizers.
- II-E-221 C. Green, MRI, to N. Green, Michigan State University. January 14, 1986. Telecon:

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Information pertaining to EO sterilization practices.

- II-E-222 B. Boomer, MRI, to Colorado APCD. January 23, 1986. Telecon: Information concerning State EO emissions inventory.
- II-E-223 B. Boomer, MRI, to R. Beerman, Indiana State Board of Health. January 23, 1986. Telecon: Information concerning State EO emissions inventory.
- II-E-224 B. Boomer, MRI, to Contractor, Louisiana Department of Environmental Quality. January 23, 1986. Telecon: Status of State program on EO emissions.
- II-E-225 B. Boomer, MRI, to L. Chamberlain, Minnesota Pollution Control Agency. January 23, 1986. Telecon: Information concerning State EO emissions inventory.
- II-E-226 B. Boomer, MRI, to E. Wood, Oregon Department of Environmental Quality. January 23, 1986. Telecon: Information concerning State EO emissions inventory.
- II-E-227 C. Green, MRI, to Dr. A.H. Groth, Jr., Alabama Veterinary Medical Association. January 23, 1986. Telecon: Information relative to EO sterilization in veterinary clinics.
- II-E-228 C. Green, MRI, to Dr. Womer, Village Veterinary Clinic. January 23, 1986. Telecon: Information relative to EO sterilization in veterinary clinics.
- II-E-229 C. Green, MRI, to Dr. D.T. Allen, Boulevard Animal Hospital. January 24, 1986. Telecon: Information relative to EO sterilization in veterinary clinics.
- II-E-230 C. Green, MRI, to B. Dennis, Material Management, Duke University Medical Center. January 24, 1986. Telecon: Information pertaining to January 28, 1986 visit.

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- II-E-231 C. Green, MRI, to C. Miller, Ohio State University. January 14, 1986 and January 29, 1986. Telecon: Information pertaining to EO sterilization practices.
- II-E-232 C. Green, MRI, to D. White and W. Packard, Washington State University. January 29, 1986. Telecon: Information pertaining to EO sterilization practices and use.
- II-E-233 C. Green, MRI, to G. Carpenter and Dr. K. Bartels, Oklahoma State University. January 30, 1986. Telecon: Information pertaining to EO sterilization practices and use.
- II-E-234 C. Green, MRI, to B. Strater, University of Illinois. January 30, 1986. Telecon: Information pertaining to EO sterilization practices and use.
- II-E-235 E. Friedman, MRI, to E. Hanel, Frederick Cancer Research. February 25, 1986. Telecon: Information concerning chamber size for in-house sterilization.
- II-E-236 E. Friedman, MRI, to F. Ellis, Gambro, Inc. February 25, 1986. Telecon: Information concerning the use of a sterilizer.
- II-E-237 E. Friedman, MRI, to H. Witt, Glyco, Inc. February 25, 1986. Telecon: Information concerning the use of EO to perform ethoxylation.
- II-E-238 C. Beall, MRI, to D. Gonzales, Paso Pak Chile Company. February 26, 1986. Telecon: Information concerning EO fumigation.
- II-E-239 E. Friedman, MRI, to A. Eldridge, Midwest Sterilization Corporation. February 27, 1986. Telecon: Information concerning EO use.
- II-E-240 C. Beall, MRI, to V. Shannon, Pacon Manufacturing Corporation. February 28, 1986. Telecon: Information concerning EO use.

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II-E-241 C. Beall, MRI, to D. Johnson, Plant Disease Research Laboratory. February 28, 1986. Telecon: Information concerning the use of a cylindrical EO chamber.

II-E-242 C. Beall, MRI, to C. Zipfel, SCM Corporation, February 28, 1986. Telecon: Information concerning spice fumigation.

II-E-243 E. Friedman, MRI, to R. Hauser, Old Dartmouth Historical Society. February 28, 1986. Telecon: Information concerning the use of a VacudyneTM chamber.

II-E-244 D. Newton, MRI, to S. Walker, Boston Public Library. February 28, 1986. Telecon: Information concerning EO use in document fumigation.

II-E-245 C. Beall, MRI, to B. Ames, Richards Medical. March 4, 1986. Telecon: Information concerning EO use.

II-E-246 C. Beall, MRI, to R. Cambron, Seamless Hospital Products. March 4, 1986. Telecon: Information concerning EO use and ChemroxTM scrubber.

II-E-247 C. Beall, MRI, to J. Taylor, Seamless Latex. March 4, 1986. Telecon: Information concerning the relocation of EO sterilization process to other sites. Has not received a HIMA questionnaire.

II-E-248 C. Beall, MRI, to Valerie (Secretary), Sherwood Medical. March 5, 1986. Telecon: Information concerning EO use.

II-E-249 C. Beall, MRI, to K. Hofacker, Snyder Laboratories. March 4, 1986. Telecon: Information concerning EO use.

II-E-250 C. Beall, MRI, to F. Edwards, Spicecraft, Inc. March 4, 1986. Telecon: Information concerning EO use.

II-E-251 C. Beall, MRI, to J. Whitbourne, Sterilization Technical Services. March 4, 1986. Telecon: Information concerning EO use.

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II-E-252 C. Beall, MRI, to H. Jones, Sterling Drug, Inc.
March 5, 1986. Telecon: Information concerning EO
use.

II-E-253 E. Friedman, MRI, to A. Peach, Jackson Laboratory.
March 7, 1986. Telecon: Information concerning EO
use.

II-E-254 E. Friedman, MRI, to J. Songer, National Animal
Disease Center. March 7, 1986. Telecon:
Information concerning EO chamber dimensions.

II-E-255 D. Newton, MRI, to C. Berndt. Araclean Services,
Inc. March 12, 1986. Telecon: Information
concerning EO use.

II-E-256 E. Friedman, MRI, to A. Marshall, Heard Museum.
March 13, 1986. Telecon: Information concerning
the size of the sterilizer chamber and its
frequency of use.

II-E-257 E. Friedman, MRI, to K. Riddell, Hollister, Inc.
March 13, 1986. Telecon: Confirmation of EO use.

II-E-258 C. Green, MRI, to C. Noell, C. F. Sauer Company.
March 13, 1986. Telecon: Information concerning
EO use.

II-E-259 E. Friedman, MRI, to S. Johnson, Lederle Laboratory
Division. March 19, 1986. Telecon: Information
concerning EO use.

II-E-260 E. Friedman, MRI, to J. Brown, Lowie Museum of
Anthropology. March 19, 1986. Telecon:
Information concerning a VacudyneTM chamber.

II-E-261 D. Newton, MRI, to J. Feeney, American Pharmseal
Laboratories. March 19, 1986. Telecon: Inquiry
concerning HIMA survey response.

II-E-262 D. Newton, MRI, to S. Degan, Findley Research, Inc.
March 19, 1986. Telecon: Information concerning
EO use for contract sterilization.

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II-E-263 E. Friedman, MRI, to D. Boyd, Lukens International.
March 20, 1986. Telecon: Information concerning
sterilization chambers.

II-E-264 E. Friedman, MRI, to D. Fouratt, Medlon, Inc.
March 20, 1986. Telecon: Information concerning
EO use.

II-E-265 E. Friedman, MRI, to H. Montory, Meer Corporation.
March 20, 1986. Telecon: Information concerning
EO use.

II-E-266 E. Friedman, MRI, to B. Starkman, Merck Sharp and
Dohme. March 20, 1986. Telecon: Information
concerning EO use.

II-E-267 D. Newton, MRI, to T. Cooke, Crescent Food Company.
March 20, 1986. Telecon: Information concerning
use of EO for fumigation.

II-E-268 C. Beall, MRI, to M. Binder, Tone Brothers, Inc.
March 24, 1986. Telecon: Information concerning
EO use.

II-E-269 C. Beall, MRI, to J. Piantedosi, U.S.C.I.
March 24, 1986. Telecon: Information concerning
EO use.

II-E-270 C. Beall, MRI, to B. Antill, U. S. Clinical
Products. March 24, 1986. Telecon: Information
concerning EO use.

II-E-271 C. Beall, MRI, to J. Laemmar, Walpak Company.
March 24, 1986. Telecon: Information concerning
EO use.

II-E-272 C. Beall, MRI, to P. Lind, Ways and Means, Inc.
March 24, 1986. Telecon: Information concerning
EO use.

II-E-273 C. Beall, MRI, to R. Billman, The West Point
Company. March 24, 1986. Telecon: Information
concerning EO use.

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II-E-274 C. Beall, MRI, to R. Hinzpeter, Wixon Industries. March 24, 1986. Telecon: Information concerning EO use.

II-E-275 C. Beall, MRI, to T. Hershey, Wyeth Laboratories, Inc. March 24, 1986. Telecon: Information concerning EO use.

II-E-276 E. Friedman, MRI, to J. Stegmeyer, Medline Industries, Inc. April 4, 1986. Telecon: Information concerning EO use.

II-E-277 C. Green, MRI, to T.K. Moore, Castle, Division of Sybron Corp. April 10, 1986. Telecon: Information concerning EO emission control devices for hospital EO sterilizers.

II-E-278 C. Green, MRI, to Dr. Thoman, Duke University Hospital. April 10, 1986. Telecon: Information concerning EO sterilization emissions and the prohibitive cost of installing control technologies.

II-E-279 C. Green, MRI, to D. Smith, Damas Corp. April 11, 1986. Telecon: Information concerning the estimated cost of installing and operating an EO emission control device.

II-E-280 C. Green, MRI, to T. Tiazza, Seamless Hospital Products. April 30, 1986. Telecon: Information concerning EO control devices and technologies.

II-E-281 A. Meiners, MRI, to P. Desai, Chemrox, Inc. July 9, 1986. Telecon: Information concerning July 15th meeting. Specifically concerns of confidentiality and test equipment security.

II-E-282 A. Meiners, MRI, to C. Darwin, EPA:AEERL. July 23, 1986. Telecon: Discussion of proposed plans for Phase I and Phase II of this project, and of estimational budget for Phase II.

II-E-283 B. Nicholson, MRI, to B. Knopf, Children's Hospital, Philadelphia, PA. July 30, 1986. Telecon: Information concerning MSA unit.

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- II-E-284 M. Murphy, MRI, to J. Patzman, Barnes Hind, Inc. August 4, 1986. Telecon: Information concerning VacudyneTM reclamation unit.
- II-E-285 V. Soltis, MRI, to D. Clarke, A. D. T. Lab Industries, Inc. November 24, 1986. Telecon: Clarification of chamber information from Section 114 request.
- II-E-286 V. Soltis, MRI, to Receptionist, Overseas Spice Company. December 3, 1986. Telecon: Confirmation of existence of former facilities using EO.
- II-E-287 V. Soltis, MRI, to J. Snyder, Alcon Laboratories, Inc. December 17, 1986. Telecon: Inquiry concerning status of revisions to original Section 114 response.
- II-E-288 C. Green, MRI, to D. Brandt, Michigan Air Quality Division, Michigan Department of Natural Resources. December 18, 1986. Telecon: Information concerning State EO emission sources.
- II-E-289 V. Soltis, MRI, to J. Patzman, Barnes Hind, Inc. January 13, 1987 and February 4, 1987. Telecon: Inquiry concerning the status of the Section 114 information request response.
- II-E-290 D. Newton, MRI, to D. Clarke, Specialty Gas, Inc. February 27, 1987. Telecon: Information concerning EO use.
- II-E-291 V. Soltis, MRI, to L. Hecker, Abbott Laboratories. March 11, 1987. Telecon: Information concerning EO emission control devices in HIMA survey for 5 facilities.
- II-E-292 S. Ross, MRI, to C. Falco, N. C. Pest Control Division. July 22, 1987. Telecon: Information concerning use of VikaneTM (Sulfuryl fluoride).
- II-E-293 S. Ross, MRI, to I. Hanthorn, Parks Library. July 22, 1987. Telecon: Library use of EO fumigation and other alternatives.

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- II-E-294 L. Humphrey, MRI, to C. Hancock, Castle-Sybron. July 23, 1987. Telecon: Information concerning the manufacture of hospital sterilization chambers.
- II-E-295 L. Humphrey, MRI, to J. Delvecchio, Central Carolina hospital. July 23, 1987. Telecon: Clarification of Section 114 response.
- II-E-296 R. Nicholson, MRI, to J. Regan, Lederle Laboratories. August 6, 1987. Telecon: Information concerning EO use.
- II-E-297 R. Nicholson, MRI, to A. Allawi, Chemrox, Inc. September 17, 1987. Telecon: Request concerning emissions monitoring at facilities using ChemroxTM scrubbers.
- II-E-298 R. Nicholson, MRI, to S. Acock, National Welders Supply Company, Inc. October 22, 1987 and October 23, 1987. Telecon: Information concerning EO gas mixtures and their costs.
- II-E-299 D. Johnson, MRI, to M. Popescu, Johnson and Johnson International. October 30, 1987. Telecon: Information concerning automatic monitoring capabilities for DamasTM scrubber.
- II-E-300 R. Rosensteel, EPA:CMS/CPB, to Addressees. Memorandum announcing and providing background materials for a workgroup meeting on NESHAP for Commercial Sterilization NESHAP project to be held November 13, 1987.
- II-E-301 J. Larson, MRI, to P. Zaccario and D. Smith, Damas Corporation. February 9, 16, and 17, 1988. Telecon: Information concerning electricity demands for the Tri-PhaseTM scrubber.
- II-E-302 J. Larson, MRI, to P. Desai, Chemrox, Inc. February 17, 1988. Telecon: Information concerning closed loop vacuum pump system.

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- II-E-303 J. Farmer, EPA:ESD, to attached Attendee list. April 5, 1988. Notice of National Air Pollution Control Techniques Advisory Committee (NAPCTAC) meeting to be held May 18 and 19, 1988.
- II-E-304 J. Farmer, EPA:ESD, to NAPCTAC members. April 7, 1988. Information, including an agenda and summary material, pertaining to National Air Pollution Control Techniques Advisory Committee (NAPCTAC) meeting to be held May 18 and 19, 1988.
- II-E-305 J. Farmer, EPA:ESD, to attached Attendee list. April 11, 1988. Information, including an agenda and summary material, pertaining to National Air Pollution Control Techniques Advisory Committee (NAPCTAC) meeting to be held May 18 and 19, 1988.
- II-E-306 J. Farmer, EPA:ESD, to J. Paul, ALAPCO, and D. Theiler, STAPPA. April 19, 1988. Information, including an agenda and summary material, pertaining to National Air Pollution Control Techniques Advisory Committee (NAPCTAC) meeting to be held May 18 and 19, 1988.
- II-E-307 R. Nicholson, MRI, to C. Olson, Donaldson Company, Inc. May 12 and June 13, 1988. Telecon: Information concerning use of the AbatorTM catalytic incinerator at commercial sterilizers.
- II-E-308 R. Nicholson, MRI, to D. Jahn, Donaldson Company, Inc. May 13, 1988. Telecon: Information concerning lower limits of EtO AbatorTM unit.
- II-E-309 R. Nicholson, MRI, to R. Leonard, Becton, Dickinson and Company. June 13, 1988. Telecon: Information concerning EO use.
- II-E-310 R. Nicholson, MRI, to R. Kruse, Advanced Air Technologies, Inc. June 14, 1988. Telecon: Information concerning EO control devices.
- II-E-311 S. Srebro, MRI, to G. Ames, South Coast Air Quality Management District. June 23, 1988. Telecon: Clarification of comments on EO BID.

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- II-E-312 R. Nicholson, MRI, to B. Byron, Tigg Corporation. June 13 and July 19, 1988. Telecon with attachments: Information concerning EO control device sales.
- II-E-313 S. Srebro, MRI, to P. Desai, Chemrox, Inc. August 17, 1988. Telecon: Information concerning the EO removal efficiency of acid-water scrubbers.
- II-E-314 D. Newton and S. Srebro, MRI, to M. Popescu, Johnson & Johnson, International. May 9, 1986 and October 4, 1988. Telecon: Confirmation of information in original contact report concerning EO sterilization processes and emissions from sterilization chamber evacuation cycles and aeration cycles.
- II-E-315 S. Srebro, MRI, to M. Popescu, Johnson and Johnson International. October 4, 1988. Telecon: Information concerning EO emissions from acid-water scrubbers.
- II-E-316 B. Shine, MRI, to C. Olson, Donaldson Company, Inc. October 19, 1988. Telecon: Information concerning use of the AbatorTM catalytic incinerator at commercial sterilizers.
- II-E-317 E. Friedman, and S. Srebro, MRI, to T. Smith, Bay Area Air Quality Management District. August 25, 1988 and October 20, 1988. Telecon: Request for information concerning EO commercial sterilizers.
- II-E-318 B. Shine, MRI, to L. Cutright, Seamless Hospital Products. October 20, 1988. Telecon: Information concerning use of the AbatorTM control device.
- II-E-319 B. Shine, MRI, to D. Williams, Johnson and Johnson Patient Care. November 1, 1988. Telecon: Clarification of Section 114 response.
- II-E-320 B. Shine, MRI, to S. Golombeck, Morris J. Golombeck, Inc. November 1, 1988. Telecon: Clarification of Section 114 response.

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- II-E-321 B. Shine, MRI, to L. Cutright, Seamless Hospital Products. November 2, 1988. Telecon: Clarification of Section 114 response.
- II-E-322 S. Srebro, MRI, to J. Margeson, U. S. EPA. November 8, 1988. Telecon. Information concerning analytical methods for EO emissions.
- II-E-323 B. Shine, MRI, to L. Cutright, Seamless Hospital Products. November 9, 1988. Telecon: Information concerning catalytic oxidation unit costs.
- II-E-324 B. Shine, MRI, to J. Mello, DAVOL, Inc. November 11, 1988. Telecon: Clarification of Section 114 response.
- II-E-325 B. Shine, MRI, to R. Shucker, Durkee-French Foods. November 18, 1988. Telecon: Information concerning shutdown dates for the sterilizer for the year.
- II-E-326 B. Shine, MRI, to D. Hammer, Michigan Science and Engineering. November 18, 1988. Telecon:
- II-E-327 B. Shine, MRI, to L. Hecker, Abbott Laboratories. November 21, 1988. Telecon: Clarification of Section 114 information on aeration room in facility No. 6.
- II-E-328 S. Srebro, MRI, to D. Meo, DM3, Inc. December 9, 1988. Telecon: Information concerning description of CATCONTM system.
- II-E-329 S. Srebro, MRI, to D. Meo, DM3, Inc. January 11, 1989. Telecon: Information concerning sterilization process used at Iolab facility.
- II-E-330 S. Srebro, MRI, to D. Meo, DM3, Inc. January 13, 1989. Telecon: Information concerning company's catalytic oxidizers.
- II-E-331 E. Friedman, MRI, to R. Shumway, Medtronic Incorporated. January 18, 1989. Telecon: Information concerning EO aeration containers.

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- II-E-332 B. Shine, MRI, to R. Kruse, Advanced Air Technologies, Inc. January 26, 1989. Telecon: Information concerning Safe CellTM Stage II costs and ventilation requirements.
- II-E-333 B. Shine, MRI, to D. Meo, DM3, Inc. January 26, 1989. Telecon: Clarification on using dilution air in a CATCONTM system.
- II-E-334 B. Shine, MRI, to R. Vincent, California Air Resources Board. February 14, 1989. Telecon: Information concerning State regulation on EO emissions.
- II-E-335 B. Shine, MRI, to J. Clouse, Colorado Department of Health. February 14, 1989. Telecon: Information concerning State air toxics regulations.
- II-E-336 B. Shine, MRI, to J. Glenn, Florida Department of Environmental Regulation, Division of Air Resources Board. February 14, 1989. Telecon: Information concerning State regulations on EO emissions.
- II-E-337 B. Shine, MRI, to P. Schleusener, Michigan Department of Natural Resources. February 14, 1989. Telecon: Information concerning State regulation of EO emissions.
- II-E-338 B. Shine, MRI, to J. Held, New Jersey Department of Environmental Protection Bureau. February 14, 1989. Telecon: Information concerning State regulations of EO emissions.
- II-E-339 B. Shine, MRI, to E. Wade, New York Department of Environmental Conservation. February 14, 1989. Telecon: Information concerning State inventory of EO emissions sources.
- II-E-340 B. Shine, MRI, to B. Morin, Rhode Island Department of Environmental Management. February 14, 1989. Telecon: Information concerning State regulations for EO emissions.

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- II-E-341 B. Shine, MRI, to L. Hartsock, Texas Air Control Board. February 28, 1989. Telecon: Information concerning State regulations on EO emissions.
- II-E-342 S. Srebro, MRI, to D. Hammer, Michigan Science and Engineering Associates. March 1, 1989. Telecon: Information concerning Safe-CellTM Stage II gas/solid reactor system.
- II-E-343 S. Srebro, MRI, to J. Hoffman, B&D Industries. March 6, 1989. Telecon: Information concerning the recovery of ethylene glycol from acid-water scrubbing of EO.
- II-E-344 S. Srebro, MRI, to G. Ames, South Coast Air Quality Management District. March 10, 1989. Telecon: Information concerning add-on controls for hospital sterilizers.
- II-E-345 S. Srebro, MRI, to J. Duvow, Chemstreams, Inc. March 16, 1989. Telecon: Information concerning acceptance of ethylene glycol for recovery.
- II-E-346 S. Srebro, MRI, to C. Olson, Donaldson Company, Inc. March 16, 1989. Telecon: Information concerning disposal of catalyst from the AbatorTM catalytic incinerator.
- II-E-347 S. Srebro, MRI, to K. Dalton, High Valley Chemical. March 16, 1989. Telecon: Requirements for accepting ethylene glycol scrubbing solutions.
- II-E-348 S. Srebro, MRI, to C. Olson, Donaldson Company. March 17, 1989. Telecon: Information concerning the ETO AbatorTM catalytic oxidizer.
- II-E-349 S. Srebro, MRI, to R. Shumway, Medtronic Incorporated. March 17, 1989. Telecon: Information concerning cost of aeration units.
- II-E-350 S. Srebro, MRI, to R. Makinen, American Sterilizer Company. March 30, 1989. Telecon: Information on catalytic oxidation control systems and air ejector control systems.

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- II-E-351 S. Srebro, MRI, to P. Desai, Chemrox, Inc. April 3, 1989. Telecon: Information request concerning the FreoxxTM CFC-12 recovery unit.
- II-E-352 S. Srebro, MRI, to C. Olson, Donaldson Company, Inc. April 4, 1989. Telecon: Information concerning the AbatorTM catalytic incinerator costs.
- II-E-353 S. Srebro, MRI, to D. Hammer, Michigan Science and Engineering Associates. April 10, 1989. Telecon: Information concerning Safe-CellTM Stage II gas/solid reactor unit dimensions.
- II-E-354 S. Srebro, MRI, to D. Meo, DM3, Inc. May 2, 1989. Telecon: Information concerning catalyst used in CATCONTM system.
- II-E-355 S. Srebro, MRI, to C. Olson, Donaldson Company, Inc. May 8, 1989. Telecon: Information concerning fan horsepower requirements.
- II-E-356 S. Srebro, MRI, to Mr. Popp, MSA/Division of Callery Chemical. May 9, 1989. Telecon: Information concerning disposal of catalyst from catalytic oxidation units.
- II-E-357 V. deOlloqui, MRI, to J. Kiceina, C. R. Bard, Inc. October 15, 1989. Telecon: Clarification of Section 114 response.
- II-E-358 V. deOlloqui, MRI, to D. Woody, Johnson and Johnson International. October 15, 1989. Telecon: Clarification of Section 114 response.
- II-E-359 V. deOlloqui, MRI, to S. Baker, The West Company. October 15, 1989. Telecon: Clarification of Section 114 response.
- II-E-360 V. deOlloqui, MRI, to C. Olson, Donaldson Company, Inc. November 3, 1989. Telecon: Information concerning the AbatorTM catalytic incinerator.

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- II-E-361 V. deOlloqui, MRI, to D. Miller, Kendall Healthcare Products Company. November 13, 1989. Telecon: Clarification of Section 114 response.
- II-E-362 V. deOlloqui, MRI, to D. Carwell, Sherwood Medical. November 14, 1989. Telecon: Clarification of Section 114 response.
- II-E-363 V. deOlloqui, MRI, to B. Shaw, C. R. Bard, Inc. November 20, 1989. Telecon: Clarification of Section 114 response.
- II-E-364 V. deOlloqui, MRI, to P. Desai, Chemrox, Inc. December 6, 1989. Telecon: Request for description of HotcellTM aeration unit.
- II-E-365 S. Srebro, MRI, to D. Smith, Damas Corporation. December 11, 1989. Telecon: Information concerning acid-water scrubbers.
- II-E-366 S. Srebro, MRI, to D. Smith, Damas Corporation. December 18, 1989. Telecon: Information concerning scrubber installation costs.
- II-E-367 V. deOlloqui, MRI, to C. Kohlmeyer, Baxter Healthcare Corporation. January 4, 1990. Telecon:
- II-E-368 V. deOlloqui, MRI, to D. Hammer, Michigan Science & Engineering. January 8, 1990 and January 9, 1990. Telecon:
- II-E-369 S. Srebro, MRI, to R. Makinen, American Sterilizer Company. January 9, 1990. Telecon: Information on catalytic oxidation control systems and EO gas mixtures.
- II-E-370 V. deOlloqui, MRI, to D. Matthews, Vacuudyne Corporation. December 6, 1989 and January 10, 1990. Telecon: Information concerning vacuum pump and rear-chamber exhaust.
- II-E-371 S. Srebro, MRI, to D. Smith, Damas Corporation. January 23, 1990. Telecon: Information concerning EO emissions controls for sterilizer rear chamber exhausts or for aeration rooms.

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- II-E-372 S. Srebro, MRI, to R. Greeno, Vacu-dyne Corporation. January 31, 1990. Telecon: Information concerning operating parameters for sterilizers and the use of the rear chamber exhaust.
- II-E-373 S. Srebro, MRI, to P. Adams, Isomedix. May 22, 1990. Telecon: Information on the use of the rear chamber exhaust.
- II-E-374 V. deOlloqui, MRI, to W. FitzGerald, Griffith Microscience, Inc. May 31, 1990. Telecon: Requesting a test report on Hot CellTM aeration emissions.
- II-E-375 V. DeOlloqui, MRI, to D. Smith, Damas. August 30, 1990. Telecon: Inquiry concerning alternative emission control uses for rear chamber exhaust acid-water scrubbers.
- II-E-376 V. deOlloqui, MRI, to P. Desai, Chemrox, Inc. October 11, 1990. Telecon: Request concerning characteristics of acid-water scrubbers.
- II-E-377 V. deOlloqui, MRI, to D. Smith, Damas Corporation. October 11, 1990. Telecon: Information concerning changeout of scrubbing liquor.
- II-E-378 V. deOlloqui, MRI, to C. Kohlmeyer, Baxter Healthcare Corporation. October 14, 1990. Telecon: Information concerning sterilization operating parameters.
- II-E-379 V. deOlloqui, MRI, to M. Popescu, Johnson and Johnson International. October 14, 1990. Telecon: Information concerning sterilizer operating parameters.
- II-E-380 V. deOlloqui, MRI, to C. Woltz, Linde Division of Union Carbide. October 17, 1990. Telecon: Information concerning the use of various sterilant gas mixtures.
- II-E-381 V. deOlloqui, MRI, to W. FitzGerald, Griffith Microscience, Inc. October 23, 1990. Telecon:

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Information request on typical operating parameters for EO/N₂ cycle.

- II-E-382 J. Weigold, EPA:ESD, to attached Attendee list. December 14, 1990. Notice of meeting of National Air Pollution Control Techniques Advisory Committee (NAPCTAC) to occur January 29, 30, and January 31, 1991.
- II-E-383 E. Friedman, MRI, to L. Cutright and T. Rierson, Professional Medical Products. December 13 and December 19, 1990. Telecon: Request concerning EO concentration levels in aeration rooms.
- II-E-384 National Air Pollution Control Techniques Advisory Committee (NAPCTAC) Minutes of Meeting held on January 29, 30, and January 31, 1991. Office of Air Quality Planning and Standards, U. S. Environmental Protection Agency.
- II-E-385 D. Hearne, MRI, to G. Karr, Alabama Department of Agriculture. April 2, 1991. Telecon: Information concerning EO use for beehive fumigation.
- II-E-386 D. Hearne, MRI, to L. Williams, N. C. Department of Agriculture. April 3, 1991. Telecon: Information concerning beehive fumigation.
- II-E-387 D. Hearne, MRI, to S. Davis and T. Hart, Tennessee Department of Agriculture, April 4, 1991. Telecon: Information concerning the frequency of beehive fumigation.
- II-E-388 D. Hearne, MRI, to J. Jorkasky, Health Industry Manufacturers Association. May 20, 1991. Telecon: Information concerning commercial sterilization facilities.
- II-E-389 D. Hearne, MRI, to C. Popejoy, California Air Resources Board. May 31, 1991. Telecon: Request on availability of EO test methods and emissions data.

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- II-E-390 D. Hearne, MRI, to C. Popejoy, California Air Resources Board. June 14, 1991. Telecon: Request on availability of EO emissions data.
- II-E-391 D. Hearne, MRI, to L. Lay, EML:TSD. June 17, 1991. Memorandum summarizing conference call minutes with contract sterilizer concerning testing protocols.
- II-E-392 D. Hearne, MRI, to T. Jennings, California Air Resources Board. July 23, 1991. Telecon: Inquiry concerning request for data from the CARB ETO data base.
- II-E-393 D. Hearne, MRI, to C. McLaughlin, California Air Resources Board. July 23, 1991. Telecon: Information concerning development of State EO data base.
- II-E-394 D. Hearne, MRI, to L. Krinsk, California Air Resources Board. July 24, 1991. Telecon: Information concerning obtaining data from the CARB ETO data base.
- II-E-395 D. Hearne, MRI, to T. Rierson, Professional Medical Products. January 30, 1992. Telecon: Information concerning use of EO sterilizers.
- II-E-396 P. Redmond, MRI, to A. Ammerman, Griffith Micro Science. February 26, 1992. Telecon: Information concerning control devices on aeration chambers for commercial sterilizers.
- II-E-397 D. Hearne, MRI, to F. Schmidt, Donaldson Company. March 16, 1992. Telecon: Information concerning the availability of emissions reduction data for the catalytic oxidation control devices.
- II-E-398 P. Redmond, MRI, to P. Cogdill, Medtronic, Inc. March 26, 1992. Telecon: Information concerning control devices on aeration chambers for commercial sterilizers.
- II-E-399 P. Redmond, MRI, to G. O'Dell, Critikon, Inc. (a Johnson and Johnson Company). March 30, 1992.

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Telecon: Information concerning control devices on aeration chambers for commercial sterilizers.

- II-E-400 P. Redmond, MRI, to M. Au, Medical Design Concepts. February 19, 1992 and March 31, 1992. Telecon: Information concerning control devices on aeration chambers for commercial sterilizers.
- II-E-401 P. Redmond, MRI, to W. Roger, IVAC. February 25, 1992 and March 31, 1992. Telecon: Information concerning control devices on aeration chambers for commercial sterilizers.
- II-E-402 P. Redmond, MRI, to P. Adams, Isomedix. February 28, 1992 and March 31, 1992. Telecon: Information concerning control devices on aeration chambers for commercial sterilizers.
- II-E-403 D. Hearne, MRI, to F. Schmidt, Donaldson Company, Inc. August 7, 1992. Telecon: Information concerning the installation of control devices on aeration room vents.
- II-E-404 D. Hearne, MRI, to P. Desai, Chemrox, Inc. October 19, 1992. Telecon: Information on the installation of control equipment on aeration rooms/chambers at EO sterilization/fumigation operations.
- II-E-405 D. Hearne, MRI, to D. Smith, Damas Corporation. October 21, 1992. Telecon: Information on installed emission control equipment on aeration rooms/chambers at EO sterilization/fumigation operations.
- II-E-406 D. Hearne, MRI, to F. Schmidt, Donaldson Company, Inc. October 21, 1992. Telecon: Information on installed emission control equipment on aeration rooms/chambers at EO sterilization/fumigation operations.
- II-E-407 D. Hearne, MRI, to F. Schmidt, Donaldson Company, Inc. December 11, 1992. Telecon: Information concerning routinely measured parameters at facilities using Donaldson catalytic oxidation

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units, and the applicability for enforcing potential standards.

- II-E-408 D. Hearne, MRI, to T. Sutherland, Chemrox, Inc. December 14, 1992. Telecon: Information concerning routinely measured parameters at facilities using Chemrox scrubber units, and the applicability for enforcing potential standards.
- II-E-409 D. Hearne, MRI, to D. Smith, Damas Corporation. February 26, 1993. Telecon: Inquiry of data correlating control device efficiency and ethylene glycol concentration.
- II-E-410 D. Hearne, MRI, to F. Schmidt, Donaldson Company, Inc. March 23, 1993. Telecon: Information concerning routinely measured parameters at facilities using Donaldson catalytic oxidation units, and the potential for use as indicators of compliance and non-compliance with an emissions standard for sterilizer vent emissions.
- II-E-411 D. Hearne, MRI. to J. McCann, International Sensor. August 11, 1993. Telecon: Information on monitoring devices for ethylene oxide.
- II-E-412 D. Hearne, MRI. to C. Popejoy, California Air Resources Board. August 12, 1993. Telecon: Information on California's definition of aeration room.
- II-E-413 D. Hearne, MRI. to C. Kohlmeier, Baxter Healthcare Corporation. August 19, 1993. Telecon: Information on ethylene oxide monitors.
- II-E-414 Meeting Minutes: Industry meeting on monitoring parameters for commercial ethylene oxide sterilization and fumigation operations. February 11 and 22, 1994.

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II-F-1	11-Dec-85	G. Edison, EPA:OAQPS, to C. Smith, EPA:OSR. Requesting transmittal of information collection request to Office of Management and Budget.

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II-I-2	00-00-00	Assessment of Ethylene Oxide Uses in Agriculture. Office of Environmental Quality Activities, United States Department of Agriculture. 109 p.
II-I-3	00-00-00	Post-Sterilization Cycle Modifications. Draft. A. Buonicore and P. Desai, Chemrox, Inc., Bridgeport, Connecticut; and G. Barbi and G. Butler, Becton Dickinson and Company, Paramus, New Jersey. 23 p.
II-I-4	00-00-00	Product brochure: Tri-Phase EtO Scrubber. Damas Corporation.
II-I-5	00-00-00	Product catalog: Model 5550 Ethylene Oxide Monitor. Baseline Industries, Inc., Lyons, Colorado. 19 p.
II-I-6	00-00-00	Gas Sterilants. Linde Division--Union Carbide Corp. 28 p.
II-I-7	00-00-00	Summary of Regulations Pertaining to Ethylene Oxide Emissions by State. Chemrox, Inc.
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II-I-15	01-Jan-81	Pest Control in Museums: A Status Report. S. Edwards, et al., eds. Association of Systematic Collections. Norman, Oklahoma. pp. 1-2, 23-30, A-11, A-17, A-19.
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II-I-24	01-Apr-83	Sterilization of Powered Surgical Instruments. R. Young and P. Walsh, Alta Base Hospital. AORN. 7 p.
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II-I-35	22-Jun-84	Final Standard: Occupational Exposure to Ethylene Oxide. U.S. Environmental Protection Agency. Federal Register. pp. 25731-25809.
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II-I-55	01-Jan-86	U.S. Industrial Outlook 1986: Medical and Dental Instruments and Supplies, Drugs. pp. 34-1 - 34-7, 54-1 - 54-7.
II-I-56	01-Jan-86	Handbook of Chemistry and Physics. 67th edition. CRC Press. Boca Rotan, Florida.
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- II-I-100 1987 U.S. Industrial Outlook: Drugs, Medical
Instruments; pp. 17-1 - 17-7, 34-1 - 34-8.
- II-I-101 Chemrox News. Chemrox, Inc., Shelton, Connecticut.
Volume 5, Number 2. June 1987.
- II-I-102 National Air Pollution Control Techniques Advisory
Committee (NAPCTAC) Minutes of Meeting held May 18
and 19, 1988. June 20, 1988. Section VIII:
Ethylene Oxide Commercial Sterilizers - Background
Information and Regulatory Alternatives.

- II-I-103 Report of Air Pollution Source Testing Conducted at IOLAB Corporation in Claremont, California, from September 27-28, 1988. December 7, 1988. Engineering Science, Inc.
- II-I-104 1989 U.S. Industrial Outlook: Drugs, Medical Instruments; pp. 16-1 - 16-4, 32-1 - 32-7.
- II-I-105 D. French, Canadian Standards Association, to Members of the CSA Technical Committee on Sterilization. March 17, 1989. Transmitting second draft of Proposed New CSA Standard CAN/CSA-Z314.9-M, Installation and Ventilation of Ethylene Oxide Sterilizers in Health Care Facilities.
- II-I-106 Ethylene Oxide Emission Control Alternatives for Sterilization Facilities. A. Buonicore and P. Desai, Chemrox, Inc. (Presented at: the EUCOMED Conference on Ethylene Oxide Sterilization a Safe Method in Safe Hands- A Practical Approach to Harmonization, Paris, France. April 20-21, 1989.)
- II-I-107 1987 Census of Manufacturers Preliminary Report Industry Series (Issued May 1989): Drugs, Medical Instruments, and Miscellaneous Food and Kindred Products. U.S. Department of Commerce, Bureau of the Census, Washington, D.C. Monthly report numbers MC87-I-28C(P), MC87-I-38B(P), and MC87-I-20I(P).
- II-I-108 Evaluation Test on a Small Hospital Refuse Incinerator Saint Bernardines Hospital - San Bernardino, California. Technical Report. California Air Resources Board. July 1989.
- II-I-109 Method 431 - Determination of Ethylene Oxide Emissions from Stationary Sources. State of California Air Resources Board. Adopted September 12, 1989.
- II-I-110 Public Hearing Notice for Proposed Regulation 11, Rule 9: Ethylene Oxide Sterilizers, enclosing Staff report supporting the proposed rule. Bay Area Air Quality Management District. September 19, 1989.
- II-I-111 Chemrox News. Chemrox, Inc., Shelton, Connecticut. Volume 7, Number 1. November 1989.
- II-I-112 J. Jorkasky, Health Industry Manufacturers Association, to Selected HIMA Members Using

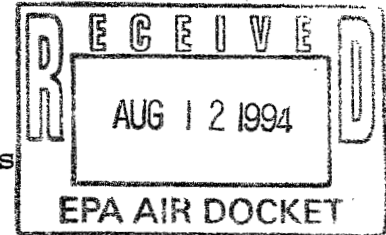
Ethylene Oxide. November 14, 1989. Memorandum transmitting an information request form for sources of EtO Emissions.

- II-I-113 Proposed Rule 336 (Control of Ethylene Oxide Emissions), Associated Proposed Revisions to Rule 210 (Fees) and Public Comments and Responses from Hearings on December 5th and 12th, 1989. County of Santa Barbara Air Pollution Control District. November 27, 1989.
- II-I-114 Proposed Ethylene Oxide Control Measure for Sterilizers and Aerators - Staff Report. California Air Resources Board. March 23, 1990.
- II-I-115 Technical Suppor Document to Proposed Ethylene Oxide Control Measure for Sterilizers and Aerators. California Air Resources Board. March 23, 1990.

Docket No. A-88-03
Subcategory II-J
Miscellaneous Federal Register Notices Published
During Proposal Development

- II-J-1 Federal Register. Final Standard. Occupational
Exposure to Ethylene Oxide. 49 FR 25734-25809.
June 22, 1984.
- II-J-2 Federal Register. Notice of Intent to List
Ethylene Oxide Under Section 112 of the Clean Air
Act and Solicitation of Information. Assessment of
Ethylene Oxide As a Potentially Toxic Air
Pollutant. 50 FR 40286-40289. October 2, 1985.
- II-J-3 Federal Register. Proposed Rule and Notice of
Hearing. Occupational Exposure to Ethylene Oxide.
53 FR 1724-1737. January 21, 1988.
- II-J-4 Federal Register. Final Standard. Occupational
Exposure to Ethylene Oxide. 53 FR 11414-11438.
April 6, 1988.

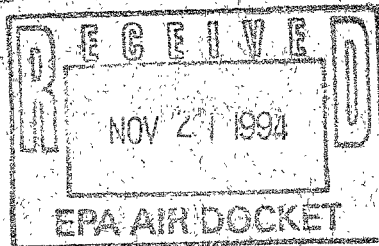
Docket No. A-88-03
Subcategory II-A
EPA Studies or Contractor Reports



<u>Number</u>	<u>Commenter or Addressee, Title, Description, Etc.</u>
III-A-01	Subpart O--Ethylene Oxide Emissions Standards for Sterilization Facilities. Proposed under part 63, chapter I, title 40 of the Code of Federal Regulations: Authority: 42 U.S.C. 7401, <u>et seq.</u> Preamble to proposed rule and notice of public hearing. 59 FR 10591
III-A-02	Subpart O--Ethylene Oxide Emissions Standards for Sterilization Facilities. Proposed under part 63, chapter I, title 40 of the Code of Federal Regulations: Authority: 42 U.S.C. 7401, <u>et seq.</u> Text of Proposed Regulation.

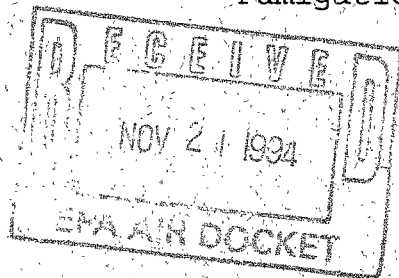
Docket No. A-88-03
Subcategory IV-A
Additional EPA Studies or Contractor Reports

<u>Docket No.</u>	<u>Description</u>
IV-A-01	U.S. Environmental Protection Agency. Ethylene Oxide Commercial Sterilization Data Base.
IV-A-02	SF-83 and Supporting Statement. Ethylene Oxide Sterilization and Fumigation Operations Final National Emissions Standards for Hazardous Air Pollutants (NESHAP).



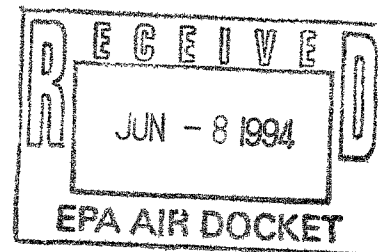
Docket No. A-88-03
Subcategory IV-B
Additional EPA Factual Memoranda

<u>Docket No.</u>	<u>Description</u>
IV-B-01	D. Hearne, MRI, to D. Markwordt, EPA:CMS. February 28, 1994. Revision of Ethylene Oxide Sterilization and Fumigation Operations Proposed National Emissions Standards for Hazardous Air Pollutants (NESHAP) to respond to comments from the Office of Management and Budget.
IV-B-02	D. Hearne and K. Schmidtke, MRI, to D. Markwordt, EPA:CMS. October 24, 1994. Revised Calculation of MACT Floors for Major Source Chamber Exhaust Vents at Ethylene Oxide Commercial Sterilization and Fumigation Operations.
IV-B-03	K. Schmidtke, MRI, to D. Markwordt, EPA:CMS. October 24, 1994. Costing of Controls for the Chamber Exhaust Vent.
IV-B-04	D. Hearne, MRI, to D. Markwordt, EPA:CMS. October 24, 1994. Revised Calculation of Emissions Reductions and Control Costs for Aeration Room Vents at Ethylene Oxide Commercial Sterilization and Fumigation Operations.
IV-B-05	K. Schmidtke, MRI, to D. Markwordt, EPA:CMS. October 27, 1994. Revised Calculation of MACT Floors for Area Source Aeration Room Vents at Ethylene Oxide Commercial Sterilization and Fumigation Operations.



DOCKET: A-88-03

CATEGORY: IV-D



Correspondence Received from Persons Outside the Agency

<u>NUMBER</u>	<u>DATE REC'D IN DOCKET</u>	<u>COMMENTS OR ADDRESSEE, TITLE, DESCRIPTION, ETC.</u>	<u>DATE OF DOCUMENT</u>
IV-D-01	04-08-94	D. Driesen, Natural Resources Defense Council, to EPA Air Docket	04-08-94
IV-D-02	04-22-94	J. W. Walton, Tennessee Department of Environ- ment & Conservation, Division of Air Pollution Control, to EPA Air Docket	04-15-94
IV-D-03	04-29-94	M. L. Corbin, Puget Sound Air Pollution Control Agency, to EPA Air Docket	04-25-94
IV-D-04	05-05-94	A. Baldwin, Health Industry Manufacturers Association, to EPA Air Docket	05-04-94
IV-D-05	05-05-94	G. A. Wilson, COBE Laboratories, to EPA Air Docket	05-03-94
IV-D-06	05-06-94	K. Keough, A. Baur, R. Wheeler, SIMS Concord/ Portex, to EPA Air Docket	05-05-94
IV-D-06A	05-06-94	A. Ammerman, Griffith Micro Science, to EPA Air Docket	05-03-94
IV-D-07	05-06-94	M. W. Pucci, American Telephone and Telegraph (AT&T), to EPA Air Docket	05-04-94
IV-D-08	05-06-94	R. J. Connor, Manufacturers of Emission Con- trols, to EPA Air Docket	05-05-94
IV-D-09	05-06-94	D. R. Mixon, McCormick & Company, Inc., to EPA Air Docket	05-05-94
IV-D-10	05-06-94	T. M. Allen, New York State Department of Environmental Conservation, to EPA Air docket	05-05-94
IV-D-11	05-06-94	C. Olson, Donaldson Company, Inc., to EPA Air Docket	05-03-94
IV-D-12	05-06-94	G. L. Messerschmidt, C. R. Bard, Inc., to EPA Air Docket	05-05-94
IV-D-13	05-06-94	W. O'Sullivan, State of New Jersey, Department of Environmental Protection and Energy, to EPA Air Docket	05-06-94
IV-D-14	05-06-94	M. J. Wax, Institute of Clean Air Companies, to EPA Air Docket	05-06-94
IV-D-15	05-06-94	B. H. Morin, Department of Environmental Manage- ment, Division of Air Resources, Rhode Island, to EPA Air Docket	05-06-94
IV-D-16	05-06-94	P. Leyden, South Coast Air Quality Management District, to EPA Air Docket	05-06-94

DOCKET: 3 A-88-03

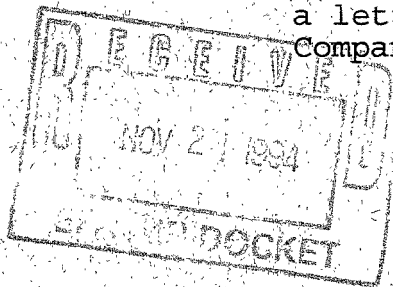
CATEGORY: IV-D

Correspondence Received from Persons Outside the Agency

<u>NUMBER</u>	<u>DATE REC'D IN DOCKET</u>	<u>COMMENTS OR ADDRESSEE, TITLE, DESCRIPTION, ETC.</u>	<u>DATE OF DOCUMENT</u>
IV-D-17	05-06-94	R. H. Colby and D. F. Theiler, State and Territorial Air Pollution Program Administrators (STAPPA) and the Association of Local Air Pollution Control Officials (ALAPCO), to EPA Air Docket	05-06-94

Docket No. A-88-03
Subcategory IV-E
EPA Memorandum of Meetings With Outside Persons
and of Telephone Conversations With Outside Persons

<u>Docket No.</u>	<u>Description</u>
IV-E-01	Meeting Minutes: EPA meeting with industry to discuss the format of the standard and the monitoring requirements of the proposed rule. April 20, 1994.
IV-E-02	D. Hearne, MRI, to C. Olson, Donaldson Company. July 28, 1994. Telecon: Clarification of written comments on the proposed rule; includes a letter response from C. Olson, Donaldson Company dated August 11, 1994.
IV-E-03	D. Hearne, MRI, to A. Ammerman, Griffith Micro Science. July 29, 1994. Telecon: Ethylene oxide use request for Griffith Micro Science's facilities.
IV-E-04	D. Hearne, MRI, to J. Dwierzynski, Isomedix, Inc. July 29, 1994. Telecon: Ethylene oxide use request for Isomedix's facilities.
IV-E-05	K. Schmidtke, MRI, to A. Ammerman, Griffith Micro Science. August 23, 1994. Telecon: Clarification of written comments on the proposed rule
IV-E-06	K. Schmidtke, MRI, to C. Olson, Donaldson Company. October 18 and 20, 1994. Telecon: Clarification of written comments on the proposed rule; includes a letter response from F. Schmidt, Donaldson Company, Inc., dated November 7, 1994.



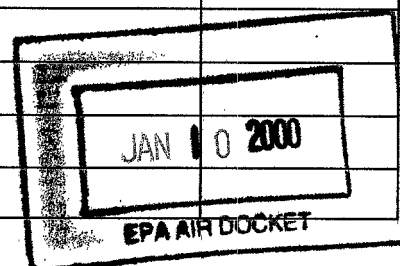
DOCKET: A-88-03

CATEGORY: IV-G

Correspondence Received from Persons Outside the Agency
After Close of Public Comment Period

<u>NUMBER</u>	<u>DATE REC'D IN DOCKET</u>	<u>COMMENTS OR ADDRESSEE, TITLE, DESCRIPTION, ETC.</u>	<u>DATE OF DOCUMENT</u>
IV-G-01	05-17-94	M. Feldstein, Bay Area Air Quality Management District, to EPA Air Docket	05-06-94
IV-G-02	05-18-94	D. A. Sheiman, Natural Resources Defense Council to EPA Air Docket	05-17-94
IV-G-03	09-26-94	Deborah A. Sheiman, Natural Resources Defense Council	09-20-94

Docket: A-88-03
Category: IV-H
Interagency Review Materials

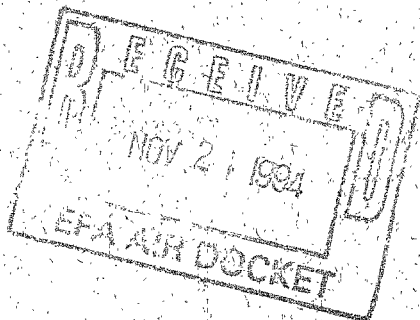
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Docket No. A-88-03

Subcategory IV-J

References Not Readily Available to the Public Elsewhere

<u>Docket No.</u>	<u>Description</u>
IV-J-01	Association for the Advancement of Medical Instrumentation. American National Standard: Guideline for Industrial Ethylene Oxide Sterilization of Medical Devices -- Process Design, Validation, Routine Sterilization and Contract Sterilization. 1988.
IV-J-02	Rule 62.6 Ethylene Oxide Sterilization and Aeration. Adopted July 16, 1991.
IV-J-03	American Society for Testing and Materials. Standard Test Method for Volatile Alcohols in Water By Direct Aqueous-Injection Gas Chromatography. ASTM Designation: D 3695-88.



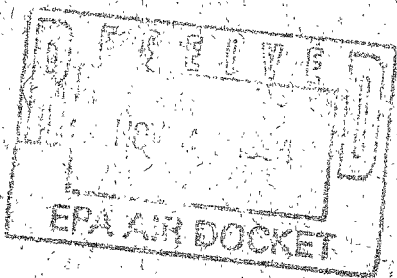
Docket No. A-88-03
Subcategory V-A
Notice of Rulemaking

Docket No.

Description

V-A-01

Subpart O--Ethylene Oxide Emissions Standards for Sterilization Facilities. Promulgated under part 63, chapter I, title 40 of the Code of Federal Regulations: Authority: 42 U.S.C. 7401, et seq. Preamble and regulatory text of the Final Rule. 59 FR ____.



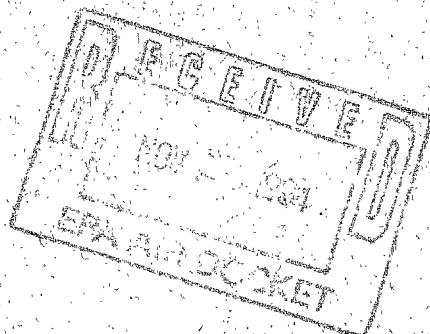
Docket No. A-88-03
Subcategory V-B
Final Support Document/Response to Public Comments

Docket No.

Description

V-B-01

U. S. Environmental Protection Agency, Office of Air Quality Planning and Standards, Emission Standards Division. National Emissions Standards for Hazardous Air Pollutants Ethylene Oxide Emissions Standards for Commercial Sterilization and Fumigation Operations -- Background Information for Final Standards: Summary of Public Comments and Responses. November 1994



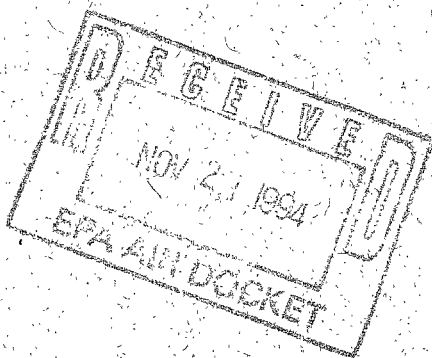
Docket No. A-88-03

Category IV-A

The following information is located in the confidential files of the Director, Emission Standards Division, Office of Air Quality Planning and Standards, U. S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711. This information is confidential and is not available for public inspection.

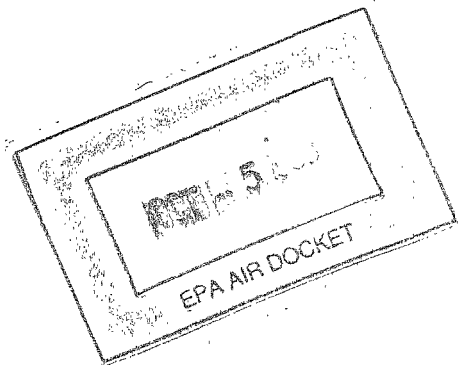
U.S. Environmental Protection Agency. Ethylene Oxide Commercial Sterilization Data Base.

This data base contains information about ethylene oxide use in the commercial sterilization and fumigation industry. The confidential material is comprised of a 44 megabyte BernoulliTM removable disk.



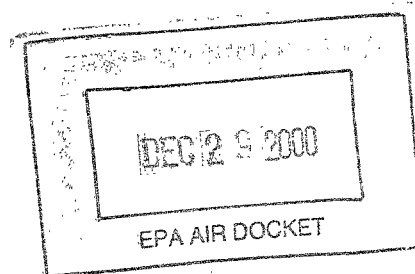
Docket: A-88-03
SubCategory: VIII-B
EPA Factual Memoranda

Document Number	Date Received in Docket	Description	Date of Document
VIII-B-1		Craig Matthiessen to Docket A-88-03. Memorandum:Ethylene Oxide Accident Investigation	09/21/98



Docket: A-88-03
SubCategory: VIII-C
EPA Correspondence to Persons Outside the EPA

Document Number	Date Received in Docket	Description	Date of Document
VIII-C-1		J. Seitz, EPA to J. Hadley, Ethylene Oxide Sterilization Association. Further delay of backvent and aeration vent requirements.	08/03/98
VIII-C-2		D. Neeley, EPA to K. Rife, Trigon Engineering Consultants, Inc. Compliance requirement clarification.	02/04/98



Docket: A-88-03
Category: VIII-D

Correspondence Received from Persons Outside of the Agency
(whether or not labeled as public comments)

<u>Document Number</u>	<u>Date Rcvd in Docket</u>	<u>Commentor, Addressee, Title or Description, etc.</u>	<u>Date of Document</u>
VIII-D-01	10-05-98	C. Soldner, Engineering Manager, Donaldson Company, Inc. to K. Steilen, P.E., Griffith MicroScience re: comments on EOSA Safety Subcommittee considerations on ethylene oxide	03-24-98
VIII-D-02	10-05-98	K.A. Steilen, P.E., The Ethylene Oxide Sterilization Association, Inc. (EOSA) to D. Markwordt, OAR, OAQPS, ESD, EPA re: EOSA safety recommendations	06-02-98
VIII-D-03	10-05-98	K.A. Steilen, P.E., Griffith MicroScience to D. Markwordt, OAR, OAQPS, ESD, EPA re: backvent emissions and concentration estimates	06-09-98
VIII-D-04	10-05-98	K. Steilen, P.E., Griffith MicroScience to D. Markwordt, OAR, OAQPS, ESD, EPA re: correction of backvent emissions and concentration estimates	06-15-98
VIII-D-05	10-05-98	C. Soldner, Engineering Manager, Donaldson Company, Inc. to D. Markwordt, OAR, OAQPS, ESD, EPA re: comments on EOSA Safety Subcommittee June 2, 1998 safety report (see VIII-D-02)	06-19-98

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Category: VIII-D

Correspondence Received from Persons Outside of the Agency
(whether or not labeled as public comments)

<u>Document Number</u>	<u>Date Rcvd in Docket</u>	<u>Commentor, Addressee, Title or Description, etc.</u>	<u>Date of Document</u>
VIII-D-06	10-05-98	J.E. Hadley, Jr., The Ethylene Oxide Sterilization Association, Inc. (EOSA) to D. Markwordt, OAR, OAQPS, ESD, EPA re: EOSA safety concerns	08-20-98
VIII-D-07	10-05-98	J.E. Hadley, Jr., The Ethylene Oxide Sterilization Association, Inc. (EOSA) to D. Markwordt, OAR, OAQPS, ESD, EPA re: EOSA safety considerations on ethylene oxide sterilization report	09-98
VIII-D-08	12-29-00	K.L. Rife, QEP, Vice President, Environmental Affairs, Trigon Engineering Consultants, Inc. to D. Markwordt, OAR, OAQPS, ESD, EPA re: request for clarification 40 CFR Parts 9 and 63 NESHAP Ethylene Oxide Commercial Sterilization Rules	08-06-97
VIII-D-09	11-08-99	T. Fisher, General Manager, Sterilization Services re: relief from the backvent control requirement	09-30-99
VIII-D-10	12-29-00	K.L. Rife, QEP, Vice President, Environmental Affairs, Trigon Engineering Consultants, Inc. to D. Markwordt, OAR, OAQPS, ESD, EPA re: diagram of cycle profile	03-16-98

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Category: VIII-D

Correspondence Received from Persons Outside of the Agency
(whether or not labeled as public comments)

<u>Document Number</u>	<u>Date Rcvd in Docket</u>	<u>Commentor, Addressee, Title or Description, etc.</u>	<u>Date of Document</u>
VIII-D-11	12-29-00	J.E. Hadley, Jr., The Ethylene Oxide Sterilization Association, Inc. (EOSA) to D. Markwordt, OAR, OAQPS, ESD, EPA re: EOSA compliance testing and monitoring provision - suggested changes	04-28-00
VIII-D-12	12-29-00	K. Steilen Hoffman, P.E., Griffith MicroScience to D. Markwordt, OAR, OAQPS, ESD, EPA re: safety issue	06-14-99
VIII-D-13	12-29-00	E. Hudson, Division of Air Quality, NCDENR to D. Markwordt, OAR, OAQPS, ESD, EPA re: ethylene oxide rule questions	03-27-00
VIII-D-14	12-29-00	E. Hudson, Division of Air Quality, NCDENR to D. Markwordt, OAR, OAQPS, ESD, EPA re: ethylene oxide rule questions	07-12-99
VIII-D-15	12-29-00	K.L. Rife, QEP, Vice President, Environmental Affairs, Trigon Engineering Consultants, Inc. to D. Markwordt, OAR, OAQPS, ESD, EPA re: recommendations with respect to 40 CFR 63 Subpart O	07-12-99

DEC 29 2000

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Docket: A-88-03

Category: VIII-D

Correspondence Received from Persons Outside of the Agency
(whether or not labeled as public comments)

<u>Document Number</u>	<u>Date Rcvd in Docket</u>	<u>Commentor, Addressee, Title or Description, etc.</u>	<u>Date of Document</u>
VIII-D-16	12-29-00	E. Hudson, Division of Air Quality, NCDENR to D. Markwordt, OAR, OAQPS, ESD, EPA re: ethylene oxide rule comments	07-13-99
VIII-D-17	12-29-00	K. Steilen Hoffman, P.E., Griffith MicroScience to D. Markwordt, OAR, OAQPS, ESD, EPA re: ethylene oxide rule comments	07-16-99
VIII-D-18	12-29-00	R.J. Kruse, P.E., Advanced Air Technologies, Inc. to D. Markwordt, OAR, OAQPS, ESD, EPA re: safety issue	08-04-00
VIII-D-19	12-29-00	R.J. Kruse, P.E., Advanced Air Technologies, Inc. to D. Markwordt, OAR, OAQPS, ESD, EPA re: safety issue	09-11-00
VIII-D-20		comment misindexed; moved to X-D-01	

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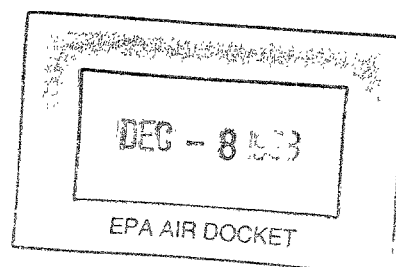
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Docket: A-88-03

SubCategory: VIII-E

**EPA Memoranda of Meetings and Telephone Conversations With Persons Outside the
EPA**

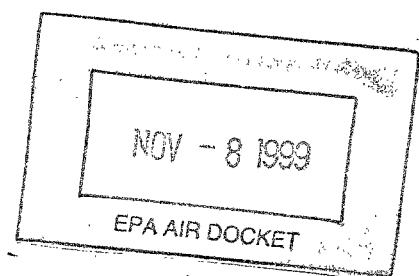
Document Number	Date Received in Docket	Description	Date of Document
VIII-E-1		D. Markwordt, EPA to the Docket A-88-03. April 1, 1998 Meeting with EOSA Safety Committee.	04/02/98
VIII-E-2		D. Markwordt, EPA to the Docket A-88-03. April 7/8, 1998 Meeting with EOSA Safety Committee.	04/09/98
VIII-E-3		D. Markwordt, EPA to the Docket A-88-03. June 25, 1998 Meeting with EOSA Safety Committee.	06/29/98
VIII-E-4		D. Markwordt, EPA to the Docket A-88-03. October 21, 1998 Meeting with EOSA Safety Committee.	12/07/98



Docket: A-88-03
SubCategory: VIII-D
Correspondence Received from Persons Outside the EPA

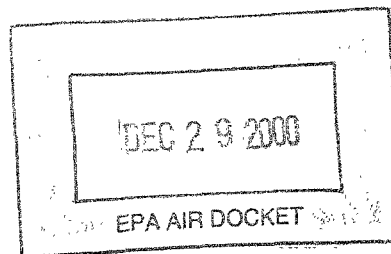
Document Number	Date Received in Docket	Description	Date of Document
VIII-D-8		K. Steilen, EOSA Subcommittee Chairperson to D. Markwordt, EPA. EOSA recommendations for Subpart O.	06/14/99
VIII-D-9		Tom Fisher, General Manager, Sterilization Services to D. Markwordt, EPA. Safety concern for ethylene oxide sterilization controls.	09/30/99

Document Number	Date Received in Docket	Description	Date of Document
VIII-E-5		Meeting EOSA/EPA.	08/25/99



Docket: A-88-03
SubCategory: VIII-E
EPA Memoranda of Meetings and Telephone Conversations With Persons Outside the
EPA

Document Number	Date Received in Docket	Description	Date of Document
VIII-E-6		D. Hearne, DH Environmental to D. Markwordt, EPA. April 22, 1998 meeting with Trigon Engineering Consultants, Inc.	04/28/98
VIII-E-7		D. Hearne, DH Environmental to D. Markwordt, EPA. September 16, 1998 meeting with Trigon Engineering Consultants, Inc.	09/24/98
VIII-E-8		D. Hearne, DH Environmental to D. Markwordt, EPA. June 23, 1999 meeting with Trigon Engineering Consultants, Inc.	07/05/99



Docket: A-88-03

SubCategory: VIII-I

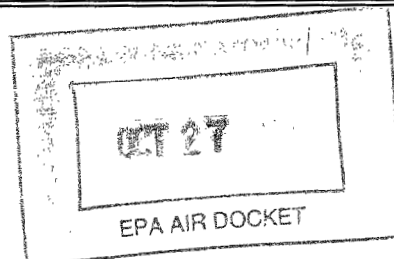
References Not Readily Available to the Public Elsewhere

Document Number	Date Received in Docket	Description	Date of Document
VII-I-1		Form for Compliance w/E.O. 12866 Docket Requirements	Oct 5, 1998

Category: IX-D

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Category: IX-G

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Category: X-B

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Docket: A-88-03

Category: X-D

Additional comments received (including any correspondence from persons outside of the EPA whether or not labeled as public comments) during the comment period

<u>Document Number</u>	<u>Date Rcvd in Docket</u>	<u>Commentor, Addressee, Title or Description, etc.</u>	<u>Date of Document</u>
X-D-01	03-26-01	T. Hanscom, Arrow International	03-26-01
X-D-02	04-17-01	R.J. Kruse, P.E., President, Advanced Air Technologies, Incorporated, Corunna, MI	undated
X-D-03	04-25-01	C.M. Price, Vice President, CHEMSTAR, American Chemistry Council, Arlington, VA	04-25-01
X-D-04	05-07-01	R.M. Currie, Senior Manager, Corporate Environment, Health & Safety, Baxter International, Inc., Deerfield, IL	05-07-01
X-D-05	05-07-01	K.A. Hoffman, Vice President - Environmental, Health & Safety, IBA, Chicago, IL	05-04-01
X-D-06	05-07-01	J.D. Freund, P.E., CHMM, Manager, Environmental Compliance, STERIS Corporation, Mentor, OH	05-04-01
X-D-07	05-07-01	J.E. Hadley, Jr., Hadley & McKenna, Legal Counsel for The Ethylene Oxide Sterilization Association, Inc. (EOSA)	05-07-01
X-D-08	05-10-01	D. Senft, Manager, Environmental, Health and Safety, United States Surgical, Tyco Healthcare, North Haven, CT	05-07-01

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EPA AIR DOCKET

Category: X-E

[illegible]

Category: X-F

Transcripts of Public Hearings

[illegible]

Category: X-J

[illegible]

Category: XI-A

[illegible]

Category: XI-B

[illegible]